Appendix 11.1

Water Features Survey



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1 Introduction

1.1.1 The Water Features Survey is a baseline study that identifies key water features that may be affected by the Proposed Scheme for Project 7, Glen Garry to Dalwhinnie. The format of the Water Features Survey comprises a schedule and a plan. The schedule (see **Section 4** of this document) lists key information about each feature in **Drawings 11.1 – 11.7** in **Volume 3** (i.e. the Plan) of this report. This information is used to inform the Design Manual for Roads and Bridges (DMRB) Stage 3 Environmental Impact Assessment.

2 Approach and Methods

Study Area

- 2.1.2 A 1km-wide corridor, notionally 500m to the east and west of the existing A9, was defined as the study area for assessment of potential Road Drainage and Water Environment impacts. As the River Truim and River Garry act as a hydrological barrier it is unlikely the Proposed Scheme will have an impact on water features beyond their opposite banks from the A9. Therefore, the study area has been refined for DMRB Stage 3 based upon the following selection criteria:
 - Hydrological features shown on a 1:10,000 Ordnance Survey (OS) map, and identified in more
 detail on the Blom topographical survey, have been delineated by a 500m offset upstream of
 the existing A9 corridor and the left bank (looking downstream) of the River Truim/ right bank
 (looking downstream) of the River Garry. The nominal distance has been extended in cases
 where there are significant hydrological features that may potentially be affected by the
 Proposed Scheme. This has been defined as the 'DMRB3 Wider Study Area'
 - An overview of the permanent and temporary works assessment boundaries applied in the assessment of the Proposed Scheme is provided in **Drawings 5.2** to **5.8** of **Volume 3**. In it, a red line boundary is delineated around the DMRB Stage 3 infrastructure design, including all mainline, junction and drainage infrastructure, and watercourse diversions. This red line represents the 'Permanent Works' assessment boundary and includes the 5m offset from the design extents. Outwith the red line, a green line is shown in a number of areas; these have been considered as areas required to enable construction activities and are considered as the 'Temporary Works' assessment boundary. For the purposes of this chapter, this has been defined as the 'DMRB3 Detailed Study Area'
- 2.1.3 All key water features within this study area were identified, categorised and individually labelled as: major watercourse, minor watercourse, pond, abstractions, and discharges.
- 2.1.4 The study area is shown in the **Water Features Plans, Drawings 11.1 11.7** in **Volume 3.** For hydrological analysis of watercourses crossed by the Proposed Scheme, full catchments areas were considered beyond the outlined study area where applicable, as shown in **Catchment Drawing 11.8** in **Volume 3**.
- 2.1.5 There are a number of spatial constraints identified within the study area, including the River Garry, the River Truim, the Highland Mainline (HML) railway, and a section of the Beauly Denny Powerline (BDL). Significant environmental constraints include internationally and nationally designated ecological sites, specifically the River Spey Special Area of Conservation (SAC) (which includes the River Truim), and the Drumochter Hills area which is also a designated SAC, Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). These are discussed in greater detail in **Chapter 12**.



Scoping Out

2.1.6 Within the Project 7 extent there are numerous existing earthworks ditches, watercourse diversions, and several minor field or road drainage ditches which do not cross the existing A9 but run parallel to the road corridor. These will likely be enveloped by the widened road corridor, however, as they are man-made and do not exhibit significant hydrological/ ecological value to the water environment (and will be replaced by a new drainage layout), they are not assessed further (i.e. are not subject to a pre- and post-mitigation assessment).

Reference Numbering

2.1.7 Each water feature has been given a unique label reference number. This has been done using letters referring to the feature type and a number which in most cases has been taken consecutively from south to north. The letters used for each type of feature and the methods of identification are shown in **Table 1**below.

Table 1:	Water Feature	Numberina

Water Feature	Reference Number	Source of Information
		OS Maps 1:50,000
		RBMP Datasheets/interactive map : http://map.environment.scotland.gov.uk/seweb/map.htm
Major Watercourse	MW	SNH Interactive Map:
		http://gateway.snh.gov.uk/sitelink/
		SEPA Flood Maps:
		http://map.sepa.org.uk/floodmap/map.htm
		OS Maps 1:10,000
		RBMP Datasheets/interactive map
		http://map.environment.scotland.gov.uk/seweb/map.htm
		SNH Interactive Map:
Minor Watercourse	W	http://gateway.snh.gov.uk/sitelink/
		SEPA Flood Maps:
		http://map.sepa.org.uk/floodmap/map.htm
		Blom survey and site walkovers
		Transport Scotland/ BEAR records
Pond	Р	OS Maps
Pond	P	Aerial Photographs
Abstraction	ABS	Spreadsheets received from The Highland Council and the Scottish Environment Protection Agency (SEPA)
Discharge	DISC	Spreadsheets received from The Highland Council and SEPA

- 2.1.8 Watercourses were classified as 'Major' or 'Minor' using the criteria noted below:
 - Major Watercourse: Shown on OS 1:50,000 scale 'vector' maps
 - Minor Watercourse: Shown on OS 1:10,000 scale maps or identified on Blom topographical survey and site walkovers
- 2.1.9 Minor watercourses include field drains and existing road drains which have been identified from topographical surveys and review of Transport Scotland records. All watercourses which cross the existing A9 (i.e. via bridges and culverts) have been an assigned a 'Hydro ID'.



Watercourse - Key Information

- 2.1.10 For each of the watercourses the following was noted: flood risk of the watercourse, water quality status, and national/international designations.
- 2.1.11 Baseline flood risk of the watercourse was assessed using CFJV hydrological and hydraulic modelling results for the 1 in 200 year flood event. Input to the hydraulic and hydrological modelling is more locally detailed than that of the SEPA Flood Maps (2014). In particular, the CFJV model has been able to use a higher resolution in areas informing the ground model.
- 2.1.12 Where available, the surface water quality status for watercourses was obtained using River Basin Management Plans (RBMPs) provided by SEPA for 2015. Surface water bodies are classified using five quality classes: High, Good, Moderate, Poor and Bad. The classification describes by how much a waterbody differs from near natural conditions. In the water features schedule the overall status has been noted. However, the majority of the smaller watercourses within the Project 7 extent do not have individual RBMP classifications.
- 2.1.13 Any national and international designations for each watercourse are noted in the schedule.

 Information on designated areas is available on the Scottish National Heritage (SNH) Interactive

 Map and also noted on the RBMP data sheets and interactive maps available from the Scotland's

 Environment website (for both references see **Chapter 11**).

Groundwater

2.1.14 The water quality status for groundwater bodies is based on available groundwater vulnerability data and private water supply information. The groundwater vulnerability scores groundwater bodies into relative classes of Very High (Class 5), High (Class 4), Moderate (Classes 3- 2) and Low (Classes 1-0) vulnerability. The vulnerability classification is derived from geological and hydraulic characteristics of aquifers and overlying material to indicate the relative risk to groundwater from contamination.

Ponds

2.1.15 Ponds were identified using the OS 1:10,000 maps. These were unnamed areas of standing water not identified as dams. Aerial photographs were used to confirm whether the ponds identified on the mapping were ponds or part of a structure.

Abstractions

2.1.16 Information on abstractions was obtained from SEPA, Perth and Kinross Council (P&KC), and The Highland Council (THC). Private water supply information was obtained from P&KC, THC and private water supply questionnaires. SEPA hold data on abstractions that have required a CAR licence.

Discharges

2.1.17 Information on discharges was obtained from SEPA, THC and Scottish Water. SEPA hold data for licensed surface water discharges. Information was also obtained on septic tanks and combined sewer overflows (CSOs) and outfalls.



Constructed Features

2.1.18 Constructed features include dams and reservoirs. These were primarily identified using OS mapping, however, information on abstractions and dams for hydro power generation have also been received from SEPA and SSE.

Baseline Sensitivities / Importance Values Key

2.1.19 Potential impacts of the Proposed Scheme on the water features identified in the survey process are provided within the main body text of **Chapter 11**. The schedule within this report contains baseline sensitivity values for each of those water features that have been subject to the environmental assessment. Those that have been scoped out are also included in the schedule; however, these have not been assigned sensitivity values. Justification for scoping out particular water features is also provided within the schedule.

3 Baseline Conditions

Introduction

- 3.1.1 Baseline conditions are the current environmental state of the water features within the study area between Glen Garry and Dalwhinnie without the construction and operation of the Proposed Scheme. Sensitive receptors are noted within the baseline assessment as they are considered to be determining factors of the existing water environment that may potentially be affected by, or affect, the Proposed Scheme.
- 3.1.2 The Water Framework Directive (WFD) aims to improve and protect the water environment. Future targets include: prevent deterioration and enhance status of aquatic ecosystems, including groundwater; promote sustainable water use; reduce pollution; contribute to the mitigation of floods and droughts.
- 3.1.3 River Basin Management Plans (RBMPs) were produced as a requirement of the WFD by which statutory objectives, based on ecological assessments and economic judgments, are set for Scottish waters, and cover all types of water bodies (such as rivers, lochs, lakes, estuaries, coastal waters and groundwater). The RBMPs also:
 - describe the current condition of our water bodies
 - identify where current or historic activities are reducing the quality of the water bodies
 - describe the actions required to ensure our designated waters of special value (for example, drinking waters, shellfish waters, bathing waters, and waters designated for their plants and animals) are up to required standards
 - describe the actions needed to deliver environmental improvements over the next six years, and longer, to 2027
- 3.1.4 The existing RBMP information provides current WFD water quality classification status, existing anthropogenic pressures and any improvement measures identified, and fisheries designations of monitored waterbodies within the study area.
- 3.1.5 The baseline information/ classifications are used to ensure the Proposed Scheme would not have a deleterious/ detrimental effect on the RBMP status of watercourses within Project 7, and where applicable, demonstrate that betterment can be provided comparative to the existing A9.



River Garry (MW7.1)

3.1.6 The River Garry is a major tributary of the River Tummel, itself a tributary of the River Tay. It emerges from the northern end of Loch Garry, south-east of the Pass of Drumochter, and flows south-eastwards and eastwards through Glen Garry to the west of the existing A9 and the HML railway. It is controlled by a dam at the outfall from the loch and there are a number of tributaries which cross under the HML railway to their confluence with the River Garry.

Water Quality

- 3.1.7 Within the RBMP the River Garry is divided into six separate sections, each with a different classification. Details of the relevant section within the Project 7 extent is provide below:
- 3.1.8 The *River Garry from Loch Garry to Garry intake* has been classified (2015) as heavily modified and having:

Overall status – Bad ecological potential

- Pre Heavily Modified Water Body (HMWB) status – Bad
- Overall ecology Bad
- Biological Poor
- Fish Poor
- Fish ecology Poor
- Fish barrier Poor

- Hydromorphology Bad
- Morphology Good
- Overall hydrology Bad
- Modelled hydrology Bad
- Hydrology (medium/high flows) –
 Bad
- Hydrology (low flows) Bad
- 3.1.9 Existing 'impacted conditions' have been identified which result in the failure of the River Garry to meet 'good' ecological status, these are; "Access for fish migration (barrier to fish migration)" and "Water flows and levels (water abstraction/ water storage)", both as a result of hydroelectricity generation.
- 3.1.10 The River Garry also receives four private point-sources discharges of sewage from the Dalnaspidal Lodge and its associated farm buildings and steading (DISC 7.1 DISC 7.4) and has, therefore, been assigned a **Low** sensitivity for water quality. The upper tributary catchments of the Allt Dubhaig are situated in the Drumochter Hills SSSI/ SAC, as discussed in **Chapter 12**. The River Garry and its upper tributaries support important but limited populations of Atlantic salmon (*Salmo salar*). The watercourse has been assessed as having high sensitivity in terms of biodiversity for the factors described above.
- 3.1.11 British Geological Survey (BGS) data indicates that the waterbody is predominantly within a high groundwater vulnerability classification zone (Class 4); therefore a **High** sensitivity value has been assigned.

Hydromorphology

3.1.1 The watercourse is sinuous in planform and varied hydromorphological features, such as pools, riffles and bar development, are evident. Accretion of gravels within the main channel has forced the river to take an alternative course under flood conditions, forming a gravel island. The river banks are non-uniform with evidence of active undercutting and erosion. The ground either side of the river is consistent with upland heather moor and grassland, with areas of bog between hummocky moraines. The construction of an access track bridge, south of Dalnaspidal Lodge, is



the only engineering modification to the River Garry within the route corridor. The dam, which controls the flow within the river, is located upstream and to the west of this bridge, outside the study area extent. Restriction of natural sediment supply is associated with the dam intake; therefore the watercourse has been assessed as having a **High** sensitivity value in terms of hydromorphology.

- 3.1.2 Morphological pressures have been provided by SEPA. Those identified within the Project 7 extent on the River Garry are:
 - Set back embankment (275m in length) (chainage (ch.) 2,175 2,450)
- 3.1.3 Coarse sediment dynamic information has also been provided by SEPA that include the River Garry. The dominant sediment regime for the reach within the Project 7 extent is:
 - Moderate erosion on the River Garry (ch. 0 − 50)

Hydrology and Flood Risk

- 3.1.4 There are two dams located between the Allt Dubhaig and River Garry (National Grid Reference (NGR) 264272 772779) and the outlet of Loch Garry (NGR 264338 772434) which act to regulate flow as part of local hydroelectricity production. There is also a bridge structure used for local access immediately downstream of the confluence between the River Garry and its unnamed tributary (Hydro ID 1, W7.1).
- 3.1.5 The hydraulic modelling suggests a slight backing-up effect caused by the constriction of the River Garry at the local access bridge location. This is likely contributing to the 200 year flood extent encroaching in the vicinity of the Dalnaspidal Cottage. The SEPA Potentially Vulnerable Area (PVA) information also indicates that the HML railway is at risk of inundation for the 200 year event (NGR 265771 772400). The River Garry has, therefore, been assigned a Very High sensitivity value for hydrology and flood risk.

Allt Chaorach Mor (MW7.24 Hydro ID -3) and Allt Chaorach Beag (MW7.25 Hydro ID -2) and upstream tributaries (W7.27 - W7.30)

Water Quality

- 3.1.6 Allt Chaorach Mor and Allt Chaorach Beag flow through catchments which comprise primarily of rough grazing. They pass underneath the existing A9 and HML railway prior to discharging into the River Garry. Both watercourses are considered likely to receive some untreated/ partially treated road drainage from the A9 and are not known to support any important species or habitats and have, therefore, been assigned a **Medium** sensitivity value for water quality and biodiversity.
- 3.1.7 BGS data indicates that these waterbodies are predominantly within a high groundwater vulnerability classification zone (Class 4); therefore a **High** sensitivity value is assigned.

Hydromorphology

3.1.8 Extensive sediment supply has been transported from the upper catchments and deposited along the channels as evidenced by the braided planform, and pools and riffles. There is also evidence of hard engineering both in the form of bed armouring and bank reinforcements, therefore, overall **High** hydromorphological sensitivity value has been assigned for each watercourse.



Hydrology and Flood Risk

3.1.9 The hydraulic modelling indicates that during a 1:200 year event MW7.24 and MW7.25 are only at risk of flooding agricultural land. Therefore, these features have been assigned a **Low** sensitivity value for hydrology and flood risk.

Unnamed Tributaries (W7.31 Hydro ID -1, and W7.1 Hydro ID 1)

Water Quality

- 3.1.10 Both unnamed tributaries of the River Garry are short in length (<500m). It is likely that both receive some pollutants in the form of untreated/ partially treated road runoff, and there are existing engineering pressures which are likely to affect biodiversity, therefore water quality and biodiversity have been assigned medium sensitivities.
- 3.1.11 BGS data indicates that W7.31 is within a moderate groundwater vulnerability classification zone (Class 3) and W7.1 is within a high groundwater vulnerability (Class 4) zone and therefore, it has been assigned a **High** groundwater sensitivity value.

Hydromorphology

3.1.12 Within both catchments there is low source potential from incision of channels upstream of the crossing. There is evidence of limited deposition and channel realignment in the form of straightening along profile downstream from the railway. Therefore, unnamed tributaries W7.31 and W7.1 have been assigned a **Low** hydromorphology sensitivity value.

Hydrology and Flood Risk

3.1.13 The hydraulic model suggests there could be a slight backing-up effect along W7.1 (Hydro ID 1) caused by the constriction of the River Garry at the local access bridge, and the 200 year inundation envelope encroaches upon the access track in the vicinity of Dalnaspidal Lodge. Therefore, a high sensitivity classification has been assigned for feature W7.1 (Hydro ID 1). The model indicates that feature W7.31 (Hydro ID -1) floods agricultural land, and therefore, it has been assigned a **Low** sensitivity value.

Allt Dubhaig (MW7.2)

Water Quality

- 3.1.14 The Allt Coire Dhomhain has an Overall Classification of 'Poor Status' (2015). The Allt Dubhaig has, therefore, been assigned a low sensitivity for water quality. The upper tributary catchments of the Allt Dubhaig are situated in the Drumochter Hills SSSI/SAC, as discussed in **Chapter 12**. The Allt Coire Dhomhain has a WFD Overall Classification of 'Poor Status' (2015). The Allt Dubhaig has therefore been assigned a **Low** sensitivity value for water quality and biodiversity.
- 3.1.15 The BGS data indicates that the Allt Dubhaig is within a high groundwater vulnerability zone (Class 4) and therefore, it has been assigned a **High** groundwater sensitivity value.

Hydromorphology

3.1.16 The Allt Dubhaig is a right hand bank tributary to the River Garry and flows in a southerly direction from the Pass of Drumochter into the Tay catchment. Its source is in the Drumochter



Hills to the west of the existing A9 and it is fed by the Allt Coire Dhomhain, which flows down through a steep sided valley to the Allt Dubhaig, below the Sow of Atholl. The only modification which is noted on the watercourse is the presence of a bridge at Dalnaspidal Lodge which spans the watercourse and has the potential to restrict flows upstream of the structure. The Allt Dubhaig is a Geological Conservation Review (GCR) site associated with an alluvial fan feature and progressive changes in planform ranging from braided to sinuous channel types. The Allt Dubhaig has, therefore, been classified as **High** sensitivity value in terms of hydromorphology.

- 3.1.17 Coarse sediment dynamic information has also been provided by SEPA that include the Allt Dubhaig. The dominant sediment regime for the reaches within the Project 7 extent include:
 - High deposition on Allt Dubhaig (ch. 250 – 700)
 - Balance on Allt Dubhaig (ch. 700 2,750)

 Moderate deposition on Allt Dubhaig for approximately 3km upstream (west) of HML railway (ch. 2,750 – 2,850)

Hydrology and Flood Risk

3.1.18 The hydraulic model indicates that, during a 1:200 year flood event, the HML railway is susceptible to direct flood risk from the Allt Dubhaig between ch. 2,600 and 2,950. As a result, this watercourse has been assigned a **Very High** sensitivity value.

Allt Coire Mhic-sith (MW7.3 Hydro ID 2)

Water Quality

- 3.1.19 The watercourse flows from the east beneath section of the Beauly-Denny access track, the existing A9, and the HML railway, and runs adjacent to the settlement of Dalnaspidal. It receives a point-source discharge from Station Cottages, which provides a potential source of pollutant that may affect water quality; therefore, a **Medium** sensitivity value has been assigned. Due to the existing engineering pressures on ecosystems, the watercourse has been assigned a **Medium** sensitivity value for biodiversity. There is also a hydro scheme abstraction (ABS 7.1) and a private water supply abstraction for Dalnaspidal Lodge supply (ABS7.4) upstream of the A9 which may impact on the natural hydrology of the watercourse.
- 3.1.20 BGS data indicates that the Allt Coire Mhic-sith has a moderate groundwater vulnerability classification (Class 3); therefore the waterbody has been assigned a **Medium** sensitivity value.

Hydromorphology

3.1.21 The Allt Coire Mhic-sith is a left hand bank tributary to the Allt Dubhaig. Its source in the Drumochter Hills SSSI east of A9 is at an elevation of 855m above ordnance datum (AOD). The channel is cut into the steep valley side and the relatively straight planform towards the confluence with the Allt Dubhaig at an elevation of 400m AOD, gives it the ability to generate high velocity flows and transport a large quantity of bedrock and fluvio-glacial deposits. As a tributary of the Allt Dubhaig, the supply of sediment is considered important to the morphological nature of the GCR site (results in a debris fan feature where the slope reduces); therefore, the watercourse is assigned a **High** hydromorphological sensitivity value.

Hydrology and Flood Risk

3.1.22 The Allt Coire Mhic-sith hydro scheme abstraction serves a hydrological function for local social and economic use. The hydraulic model also indicates that, during a 1:200 year event, the



watercourse poses a direct risk to the adjacent populated area, in the vicinity of the Dalnaspidal Farm Buildings. Therefore, a **High** sensitivity value been assigned to the Allt Coire Mhic-sith.

Unnamed Tributaries of Allt Dubhaig

(W7.37 Hydro ID 3, W7.40 Hydro ID 3A, W7.43 Hydro ID 4, W7.50 Hydro ID 5, W7.3 Hydro ID 6, W7.54 Hydro ID 7)

Water Quality

- Each of these short tributaries drain a shelter belt of forestry before passing underneath the existing A9, NCN7 and the HML railway, before discharging into the Allt Dubhaig alluvial fan. It is likely that each tributary receives untreated or partially treated road runoff within their limited tributary length. There is also an unsurveyed surface water abstraction (ABS 7.5 location received from P&KC) from watercourse W7.40 used for Dalnaspidal Cottages. A **Low** water quality sensitivity value has been assigned for each water feature. The watercourses are considered to have **Low** sensitivity value for biodiversity due to evidence of existing modifications, such as bed armouring, which are likely exert significant pressures.
- 3.1.24 BGS data indicates that each of these watercourses has moderate groundwater vulnerability (Class 3) and therefore they have been assigned as **Medium** groundwater quality sensitivity value.

Hydromorphology

3.1.25 These watercourses are generally stable upstream of their A9 crossings, with some evidence of incision shown. The channels appear to have been heavily modified and engineered in areas to prevent further incision and sediment deposition downstream. Each watercourse has, therefore, been assigned a **Low** hydromorphology sensitivity value.

Hydrology and Flood Risk

3.1.26 The hydraulic model indicates that during the 1:200 year flood event these tributaries pose a flood risk to uncultivated agricultural land. Therefore, each of these watercourses has been assigned a low sensitivity classification. These watercourses are considered to have minimal hydrological importance to sensitive ecosystems and/ or social and economic uses and therefore, have been assigned a **Low** sensitivity value for hydrology.

Allt Ruidh nan Sgoilearan (MW7.4 Hydro ID 8)

Water Quality

- 3.1.27 Allt Ruidh nan Sgoilearan flows from the east beneath the existing Beauly-Denny access track, the existing A9 and the HML railway prior to its confluence with Allt Dubhaig at NGR 263620 773848. It is likely to receive some pollutants in the form of untreated/ partially treated road runoff, and there are existing pressures from engineering at the inlet and outlet which are likely to affect biodiversity; therefore, water quality and biodiversity have been assigned **Medium** sensitivity values.
- 3.1.28 BGS data indicates that Allt Ruidh nan Sgoilearan has a very high groundwater vulnerability (Class 5); therefore, it has been assigned a **Very High** groundwater quality sensitivity value.



Hydromorphology

3.1.29 Sediment is generated from incision upstream of the crossing; downstream there is evidence of incision, bank erosion and lateral migration. The watercourse has therefore been assigned a **High** hydromorphology sensitivity value.

Hydrology and Flood Risk

3.1.30 The hydraulic model indicates that during a 1:200 year event the Allt nan Sgoilearan could potentially pose an indirect flood risk to the HML railway. Therefore, this watercourse has been assigned a **High** sensitivity value.

Unnamed Tributary of Allt Dubhaig (W 7.60 Hydro ID 10,)

Water Quality

- 3.1.31 This unnamed tributary of Allt Dubhaig is short in length and drains a strip of forestry before crossing underneath the A9. It is likely to intercept some untreated or partially treated runoff and therefore has been assigned a **Medium** sensitivity value for water quality. There are sections of concrete slab bank protection situated upstream of the both crossing. This modification is likely to exert major pressure on biodiversity, and therefore a **Low** sensitivity value has been assigned.
- 3.1.32 BGS data indicates that the tributaries are within a moderate groundwater vulnerability (Class 3) zone and therefore have been assigned a **Medium** groundwater quality sensitivity value.

Hydromorphology

3.1.33 The tributary has been extensively modified upstream in the form of concrete slab bed protection. It has also been modified on the downstream section from hard bank engineering and has therefore, been assigned a **Low** sensitivity value for hydromorphology.

Hydrology and Flood Risk

3.1.34 The hydraulic model indicates that during a 1:200 year flood the features W7.60 and W7.4 inundate uncultivated agricultural land and, therefore, have been assigned a **Low** sensitivity value.

Unnamed Watercourse (MW 7.5 Hydro ID 12)

- 3.1.35 The unnamed watercourse is a short tributary of Allt Dubhaig, which has a catchment size of approximately 0.04km² and a length of 450m. The watercourse crosses underneath the existing A9, National Cycle Network 7 (NCN7) cycle path and HML railway. It is likely to receive some pollutants in the form of untreated/ partially treated road runoff; therefore, water quality and biodiversity have been assigned **Medium** sensitivity value.
- 3.1.36 BGS data indicates that the tributaries are within a moderate groundwater vulnerability (Class 3) zone and therefore have been assigned a **Medium** groundwater quality sensitivity value.
- 3.1.37 There is damaged bed armouring where the channel is vertically unstable, and there has been an adjustment to a more stable bed slope at the crossing upstream and downstream. This evidence of accelerated incision may be due to increases in discharge due to felling and other anthropogenic influences within the catchment. Given that there is evidence of natural fluvial



and morphological features, as well as modifications and anthropogenic influences, a **Medium** sensitivity value has been assigned for hydromorphology.

3.1.38 The DMRB Stage 3 hydraulic model indicates that, during a 1:200 year flood, Hydro ID 12 inundates uncultivated agricultural land, thus it has been assigned a **Low** sensitivity value for hydrology and flood risk.

Allt Fuar Bheann (MW7.6 Hydro ID 13)

Water Quality

- 3.1.39 The watercourse crosses underneath General Wade's Military Road, the existing A9, NCN7and HML railway before its confluence with Allt Dubhaig at NGR 263429 774571. It is likely that the Allt Fuar Bheann receives some untreated or partially treated road runoff and therefore has been assigned a **Medium** water quality sensitivity value. There are stepped features upstream with a small section of bed and bank protection which could affect biodiversity. Allt Fuar Bheann has therefore been assigned a **Low** biodiversity sensitivity value.
- 3.1.40 BGS data indicates that the watercourse is within a very high groundwater vulnerability zone (Class 5) and, therefore, has been assigned a **Very High** sensitivity value for groundwater quality.

Hydromorphology

3.1.41 There is evidence of sediment transport through the A9 and NCN7 crossings, with deposition downstream of the railway crossing in the form of an alluvial fan. Lateral channel migration is also shown downstream of the A9, where there is no bank protection. The watercourse has therefore been assigned a **High** sensitivity value for hydromorphology.

Hydrology and Flood Risk

3.1.42 The hydraulic model indicates that during a 1:200 year flood event the Allt Fuar Bheann could potentially pose an indirect flood risk to the HML railway, therefore this feature has been assigned a **High** sensitivity value.

Unnamed Tributaries of Allt Fuar Bheann, Allt Dubhaig and Allt a' Chaorainn (W7.62 Hydro ID 14, W7.64 Hydro ID 15, W7.5 Hydro ID 17, W7.70 Hydro ID 18, W7.74 Hydro ID 20, W7.76 Hydro ID 21 and W7.78 Hydro ID 22)

Water Quality

- 3.1.43 Each of these watercourses is short in length and drain a limited area of land prior to their crossing underneath the existing A9. It is likely that each of these watercourses intercepts some untreated or partially treated road runoff, and therefore they have been assigned a **Low** water quality sensitivity value. The watercourses also have a variety of bed and bank modifications that are likely to impact biodiversity; therefore, they have been assigned a low sensitivity.
- 3.1.44 BGS data indicates that each of the tributaries is situated within a moderate groundwater vulnerability zone (Class 3) and therefore, has been assigned a **Medium** groundwater quality sensitivity value.



Hydromorphology

3.1.45 Each of the tributaries has been modified upstream to some extent, in the form of bed or bank scour protection. The tributary W7.62 Hydro ID 14 has also been modified on the downstream section as there is a concrete step at the outlet. The tributary W7.70 Hydro ID 18 is shown to have been straightened between NCN7 and the HML railway. Due to these factors, specific tributaries have been assigned a medium sensitivity, whereas the others have been assigned a **Low** sensitivity value in terms of hydromorphology.

Hydrology and Flood Risk

3.1.46 The hydraulic model indicates that during a 1:200 year flood, W7.5 Hydro ID 17 and W7.70 Hydro ID 18 could potentially pose an indirect flood risk to the HML railway, and therefore these features have been assigned a high sensitivity for flood risk. The watercourses with Hydro IDs 14, 15, 21 and 21 are associated with the inundation of uncultivated agricultural land; therefore, these features have been assigned a low sensitivity for flood risk. These watercourses are considered to have minimal hydrological importance to sensitive ecosystems and/ or social and economic uses and therefore, have been assigned a **Low** sensitivity value for hydrology.

Allt a' Chaorainn (MW7.9 Hydro ID 23)

Water Quality

- 3.1.47 Allt a Chaorainn has a catchment size of approximately 3km² and a length of 3.12km, flowing in a westerly direction; its confluence with the Allt Dubhaig is located at NGR 263108 775332. It is likely that the watercourse intercepts some road runoff at the road crossing, and therefore, has been assigned a **Medium** water quality sensitivity value. The watercourse has engineered bed and bank modifications approximately 20m upstream and 40m downstream of the A9 crossing that are likely to impact biodiversity, resulting in a **Low** sensitivity value.
- 3.1.48 BGS data indicates that the Allt a' Chaorainn is situated within a very high groundwater vulnerability zone (Class 5) and therefore has been assigned a **Very High** groundwater quality sensitivity value.

Hydromorphology

3.1.49 There is a large supply of sediment generated from the steep slopes in the upper Allt a' Chaorainn catchment in the vicinity of the A9 crossing location. There is evidence of vertical incision, deposition and lateral migration of the channel; therefore, the Allt a' Chaorainn has been assigned a **High** sensitivity value for hydromorphology.

Hydrology and Flood Risk

3.1.50 This watercourse is considered to have minimal hydrological importance to sensitive ecosystems and/ or social and economic uses and therefore, has been assigned a low sensitivity for hydrology. The hydraulic model indicates that, during a 1:200 year flood, the Allt a' Chaorainn is associated with direct flooding of the HML railway between ch. 2,750 and 2,900; therefore, this feature has been assigned a **Very High** sensitivity value.



Unnamed Watercourse (MW 7.10)

Water Quality

- 3.1.51 The short unnamed watercourse has a length of approximately 400m and discharges into the Allt Dubhaig at NGR 263107, 775325, as shown in **Drawing 11.3 (Volume 3)**. It is likely that the watercourse intercepts some road runoff at the road crossing, and therefore has been assigned a **Medium** water quality sensitivity value.
- 3.1.52 BGS data indicates that the watercourse is situated within a medium groundwater vulnerability zone (Class 3) and therefore has been assigned a **Medium** groundwater quality sensitivity value.

Hydromorphology

3.1.53 The watercourse is shown to be incised and meandering, with evidence of deposition bars and pools and riffles in places. A **High** sensitivity value has been assigned to hydromorphology for this unnamed watercourse.

Hydrology and Flood Risk

3.1.54 The DMRB Stage 3 hydraulic model indicates that during a 1:200 year flood event the HML railway is at risk of inundation from MW 7.10, therefore it has been assigned a **Very High** sensitivity value for hydrology and flood risk.

Unnamed Tributaries of Allt Dubhaig and River Truim (W7.81 Hydro ID 25, W7.6 Hydro ID 27, W7.84 Hydro ID 28, W7.89 Hydro ID 30)

Water Quality

- 3.1.55 Each of these tributary watercourses is short in length and drain a limited area of land prior to their crossing underneath the existing A9. It is likely that each of these watercourses intercept untreated or partially road runoff, and therefore they have been assigned a **Low** water quality sensitivity value. The watercourses also have a variety of bed and bank modifications that are likely to affect water quality in terms of biodiversity, which has been assigned a **Low** sensitivity value.
- 3.1.56 BGS data indicates that the tributaries are situated within a moderate groundwater vulnerability zone (Class 3) and therefore they have been assigned a **Medium** groundwater quality sensitivity value.

Hydromorphology

3.1.57 Each of these tributaries has been artificially straightened and engineered to some extent and has, therefore, been assigned as a **Low** sensitivity value for hydromorphology. Where sediment is supplied from locally incising channels and drains on tributaries W7.6 (Hydro ID 27) and W7.84 (Hydro ID 28); these have been assigned a **Medium** hydromorphology sensitivity value.

Hydrology and Flood Risk

3.1.58 The hydraulic model suggests that during a 1:200 year event these tributaries are at little or no risk of flooding sensitive receptors; therefore they have been assigned a **Low** sensitivity value for hydrology and flood risk.



Allt an Creagach (MW7.11 Hydro ID 31)

Water Quality

- 3.1.59 The Allt an Creagach has a catchment size of approximately 0.823km² and a length of 2.1km, which generally flows in a westerly direction, passing underneath the A9 and the HML railway before discharging to the River Truim at NGR 262795 776313. It is likely that the watercourse intercepts some road runoff at the road crossing, and therefore has been assigned a **Medium** water quality sensitivity value. Bank protection and step pools upstream are likely to affect biodiversity, which has been a **Low** sensitivity value.
- 3.1.60 The BGS data indicates that the Allt an Creagach crossing of the existing A9 is situated within a high groundwater vulnerability zone (Class 4) and therefore it has been assigned a **High** hydromorphological sensitivity value.

Hydromorphology

- 3.1.61 The Allt an Creagach is an active morphological channel, which provides a high sediment supply from its steep catchment slopes. The existing A9 road crossing is on an alluvial fan showing evidence of previous large scale deposition, and there is risk of avulsion (flow abandoning current channel and cutting new channel). This watercourse has therefore been assigned a **High** sensitivity value for hydromorphology.
- 3.1.62 Coarse sediment dynamic information has also been provided by SEPA that include Allt an Creagach. The dominant sediment regime for the reaches within the Project 7 extent include:
 - Moderate erosion for approximately 890m upstream (east) of existing A9 crossing (ch. 3,800) on Allt an Creagach
- 3.1.63 Morphological pressures have been provided by SEPA. Those identified on Allt an Creagach are:
 - Pipe box culvert at Hydro ID 31 (28m in length) (ch. 3,770 3,800)
 - Pipe box culvert at the HML railway, downstream of Hydro ID 31 (ch. 3,850 3,900)

Hydrology and Flood Risk

3.1.64 The hydraulic model indicates that the Allt an Creagach overtops and floods the existing A9 and HML railway during the 1:200 year flood event. Therefore, the Allt an Creagach has been assigned a **Very High** sensitivity value for hydrology and flood risk.

Unnamed Tributaries of River Truim

(W7.93 Hydro ID 33, W7.94 Hydro ID 34, W7.95 Hydro ID 35, W7.101 Hydro ID 36, W7.105 Hydro ID 37, W7.106 Hydro ID 38, W7.108 Hydro ID 39, W7.109 Hydro ID 40, W7.115 Hydro ID 42)

Water Quality

3.1.65 Each of these watercourses is short in length and drain a limited area of land prior to crossing under the existing A9. It is likely that each watercourse intercepts untreated or partially treated road runoff, and therefore they have been assigned a low water quality sensitivity. The watercourses also have a variety of bed and bank modifications that are likely to impact biodiversity, resulting in a **Low** sensitivity value.



3.1.66 BGS data indicates that these tributaries are situated within a high groundwater vulnerability zone (Class 4) and therefore have been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.67 The tributaries are engineered, and there is little evidence of vertical incision, erosion and lateral migration upstream of the existing A9 road crossings. Therefore, these watercourses have been assigned a **Low** sensitivity value with the exception of W7.93 (Hydro ID 33), which has been assigned a **Medium** sensitivity value, given that it is susceptible to channel migration on the northern edge of an alluvial fan.

Hydrology and Flood Risk

- 3.1.68 These watercourses are considered to have minimal hydrological importance to sensitive ecosystems and/ or social and economic uses and therefore, have been assigned a **Low** sensitivity value for hydrology.
- 3.1.69 The hydraulic model indicates that W7.93 (Hydro ID 33) overtops and inundates the existing A9 road surface during a 1:200 year flood event. Therefore, a very **High** sensitivity value has been assigned for this watercourse. The other watercourses (Hydro ID 34 42) appear to experience a throttling effect from 1:200 year flood levels for the River Truim. However, these water features are not shown to flood the existing A9 or its adjacent embankment during the 200 year event. These watercourses pass through uncultivated land, thus have been assigned a **Low** sensitivity value for hydrology and flood risk.

River Truim (MW 8.1)

- 3.1.70 The River Truim is a major right bank tributary of the River Spey, draining the western edges of the Cairngorms Mountains with a catchment area of 125km². Its headwaters are situated in the Pass of Drumochter, approximately 8km south of Dalwhinnie.
- The River Truim has a WFD classification of 'Good ecological potential' from source to Allt Cuaich confluence (2015), and 'Moderate ecological potential' in its lower catchment (2015). It is designated as part of the River Spey SAC for its populations of Atlantic salmon (the Truim is noted as important for its salmonid smolt production) and otter (*Lutra lutra*). (Sea lamprey (*Petromyzon marinus*) and freshwater pearl mussel (*Margaritifera margaritifera*) are also qualifying features of the River Spey SAC; no evidence has been determined in the River Truim Project 7 extents, however, presence is assumed for assessment purposes.) The River Truim is situated in the Cairngorms National Park and its source is also within the Drumochter Hills SSS)/ SAC as discussed in **Chapter 12**. Overall, the watercourse has been assessed as having a **Very High** sensitivity value due to the various factors described above.

Water Quality

3.1.72 In the RBMP the River Truim is divided into two separate sections, each with a different classification:

The *River Truim from source to Allt Cuaich confluence* has been classified (2015) as heavily modified and having:

Overall status - Good ecological potential with medium confidence

Pre-HMWB status – Moderate

Biological elements – Moderate

Overall ecology – Moderate

• Fish – Moderate



- Fish ecology Good
- Fish barrier Moderate
- Hydromorphology Moderate
- Morphology Good
- Overall hydrology Moderate

- Modelled hydrology Moderate
- Hydrology (medium/ high flows) Moderate
- Hydrology (low flows) Good

3.1.73 Existing anthropogenic pressures have been identified which result in the failure of the River Truim to meet 'good' ecological status, these are: "abstraction" and "morphological alterations for production of renewable electricity". Measures to protect or improve the water environment from these pressures include: "control pattern/timing of abstraction (hands off flow/utilisation of storage (new/existing)", and "removal of barriers or provision of mechanisms to enable fish migration".

Hydromorphology

- 3.1.74 The hydromorphological processes of the River Truim and its tributaries are considered as part of the wider River Spey catchment. Its headwaters are situated at an elevation of 450m AOD, draining the steep valley sides to the east and west, flowing in a north-easterly direction for a distance of approximately 22km to the confluence with the Spey at 250m AOD.
- 3.1.75 The geology of the Truim catchment is dominated by metamorphic bedrock, with much of the superficial geology comprised of glacial till and alluvium. For long stretches, where the floodplains are flat and wide, the gentle gradient and glacio-fluvial sediment supply has resulted in a sinuous river planform.
- 3.1.76 Morphological pressures have been provided by SEPA. Those identified within the Project 7 extent on the River Truim are highlighted below:
 - Tributary channel to River Truim under the HML via pipe box culvert (28m in length) (ch. 3,870)
 - Tributary channel to River Truim under the HML via pipe box culvert (24m in length) (ch. 3,950)
 - River Truim under the HML via pipe box culvert (13m in length) (ch. 4,950)

- Ford on River Truim (5m in length) (ch. 5,730)
- HML bridge over River Truim (ch. 6,150)
- Access bridge over River Truim at Balsporran Cottages (ch. 6,850)
- Footbridge over River Truim (ch. 7,900)
- 3.1.77 Coarse sediment dynamic information has also been provided by SEPA for the River Truim. The dominant sediment regime for the reaches within Project 7 are summarised in **Table 2**.

Table 2: Dominant sediment regime for River Truim at discrete locations in Project 7

Dominant sediment regime	Location by chainage (ch.)
High deposition on River Truim	ch. 3,800 – 4,400 ch. 6,150 – 6,450 ch. 6,650 – 6,850
Moderate erosion on River Truim	ch. 4,440 – 4,730 ch. 5,000 – 5,600 ch. 5,750 – 6,150 ch. 6,450 – 6,650 ch. 6,850 – 6,950



Dominant sediment regime	Location by chainage (ch.)
Moderate deposition on River Truim	ch. 4,730 – 5,000 ch. 5,600 – 5,750 ch. 6,950 – 9,500

3.1.78 As the River Truim exhibits a natural range of morphological features (e.g. pools, riffles, bars, varied natural river bank profiles), with limited signs of artificial modifications or morphological pressures. A **High** sensitivity value has therefore, been assigned to hydromorphology for the watercourse.

Hydrology and Flood Risk

3.1.79 The DMRB Stage 3 hydraulic model indicates that during a 1:200 year flood event the embankment of the HML railway and existing A9 is at risk of inundation from the River Truim, therefore, it has been assigned a **Very High** sensitivity value for hydrology and flood risk.

Unnamed Tributaries of River Truim

(W7.9 Hydro ID 43, W7.134 Hydro ID 44, W7.137 Hydro ID 45, W7.146 Hydro ID 46, W7.147 Hydro ID 47, W7.150 Hydro ID 49, W7.152 Hydro ID 50, W7.15 Hydro ID 51)

Water Quality

- 3.1.80 Each of these watercourses is short in length and drain a limited area of land prior to crossing the existing A9. It is likely that each of these watercourses intercepts untreated or partially treated road runoff, and therefore they have been assigned a **Low** water quality sensitivity value. The watercourses also have a variety of bed and bank modifications that are likely to affect biodiversity, resulting in a low sensitivity classification.
- 3.1.81 BGS data indicates that the tributaries are situated within a High groundwater vulnerability (Class 4) and therefore, a **High** groundwater quality sensitivity value has been assigned for each feature.

Hydromorphology

3.1.82 The tributaries (Hydro IDs 43 - 50) are small hillslope drainage channels which have been engineered, and therefore, have been assigned a **Low** hydromorphology sensitivity value. The tributary W7.15 (Hydro ID 51) has a slightly higher potential for sediment input and morphological alteration due to the presence of glacial material within the catchment, and has been assigned a **Medium** sensitivity value.

Hydrology and Flood Risk

3.1.83 The hydraulic model indicates that during a 1:200 year flood event W7.9 (Hydro ID 43) and W7.134 (Hydro ID 44) could potentially pose an indirect risk to the existing A9. It also suggests that W7.15 (Hydro ID 51) could potentially contribute an indirect flood risk to the HML railway downstream of the crossing. These features have therefore been assigned a **High** sensitivity value. The remaining features are determined to have little or no flood risks associated with the 200 year event and therefore, have been classed as **Low** sensitivity value.



Allt Coire Chaorainn and associated tributary (MW7.18 / MW7.19 Hydro ID 52)

Water Quality

- 3.1.84 The Allt Coire Chaorainn and tributary have a catchment area of approximately 3.461km² and a length of 3.37km, flowing in a north-easterly direction underneath the Drumochter Lodge access track, existing A9, General Wade's Military Road before discharging into the River Truim at NGR 262793 779739. The Allt Coire Chaorainn receives a point source discharge from Drumochter Lodge (DISC 7.8), and is likely to receive some untreated or partially treated runoff from the existing A9. Both watercourses have been assigned a **Medium** sensitivity value for water quality. A **High** sensitivity value for biodiversity water quality has been assigned due to the ecological permeability facilitated within the channel.
- 3.1.85 Both watercourses are situated within a high groundwater vulnerability zone (Class 4) and therefore, have been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.86 There is evidence of active morphological processes across the catchment. An alluvial fan is situated immediately upstream of the watercourse crossing and is associated with potential risk for channel migration. A **High** sensitivity value has been assigned for the hydromorphology of the Allt Coire Chaorainn and its tributary.

Hydrology and Flood Risk

3.1.87 The hydraulic model indicates that, during a 1:200 year event, the Allt Coire Chaorainn and its tributary are associated with direct flood risk to the existing A9 carriageway between ch. 7,250 and 7,400. The Allt Coire Chaorainn also provides a locally important social use given that it is as utilised as surface water abstraction Private Water Supply for Drumochter Lodge. These features have therefore, been assigned a **Very High** sensitivity value for hydrology and flood risk.

Unnamed tributaries of River Truim (W7.154 Hydro ID 53, W7.155 Hydro ID 54, W7.156 Hydro ID 55, W7.157 Hydro ID 56)

Water Quality

- 3.1.88 Each of these tributary drains is short in length and drain a limited area of forestry prior to their crossing under the existing A9. It is likely that each of these small watercourses intercepts untreated or partially treated road runoff, and therefore, has been assigned a **Low** water quality sensitivity value. The watercourses also have bank modifications that are likely to affect water quality in terms of biodiversity, which has been assigned a **Low** sensitivity value.
- 3.1.89 Both watercourses are situated within a high groundwater vulnerability zone (Class 4) and have therefore been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.90 The channels are forestry drains which have been extensively artificially modified, and there is little evidence of morphological diversity upstream or downstream of the crossing. These crossings have therefore, been assigned a **Low** sensitivity value for hydromorphology.



Hydrology and Flood Risk

3.1.91 The hydraulic model indicates that, during a 1:200 year event, Hydro ID 53 overtops onto the existing A9, and therefore has been assigned a **Very High** sensitivity value. Water feature W7.157 (Hydro ID 56) is not indicated to contribute towards the inundation of any sensitive receptors and has been assigned a **Low** sensitivity value.

Unnamed Tributary of River Truim (MW7.20 Hydro ID 57)

Water Quality

- 3.1.92 The unnamed watercourse has a catchment area of approximately 0.545km² and a length of 1km, generally flowing in a westerly direction, crossing under the existing A9 and NCN7 before discharging into the River Truim at NGR 263080 780415. It is likely that the watercourse will receive some form of untreated or partially treated road runoff, and has been assigned a **Medium** water quality sensitivity value. A **Medium** sensitivity value has also been assigned for biodiversity, given that there are existing pressures from bed protection and the circular culvert at the existing A9 crossing.
- 3.1.93 BGS data indicates that this watercourse is situated within a high groundwater vulnerability zone (Class 4) and has therefore, been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.94 There are artificial channel modifications in the form of bank protection at the crossing inlet. The upstream channel is incised and confined by valley sides in some locations with potential for future erosion and sediment delivery. A **Medium** sensitivity value has been assigned for the hydromorphology of this unnamed watercourse.

Hydrology and Flood Risk

3.1.95 The hydraulic model indicates that during a 1:200 year event MW7.20 (Hydro ID 57) is associated with flood risk in the vicinity of the existing A9 earthworks extents, and therefore, a **High** sensitivity value has been assigned for hydrology and flood risk.

Unnamed Tributary of River Truim (W7.19 Hydro ID 58, W7.166 Hydro ID 60)

Water Quality

- 3.1.96 These tributaries are short in length and drain a small area prior to crossing under the existing A9. It is likely that they intercept untreated or partially road runoff, and therefore has been assigned a **Low** water quality sensitivity value. The watercourses also have bank modifications that are likely to affect biodiversity, which has been assigned a **Low** sensitivity value.
- 3.1.97 The watercourses are situated within a high groundwater vulnerability zone (Class 4) and have therefore been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.98 Each watercourse has been artificially modified with engineered stone pitching steps present at the watercourse crossing inlet. The watercourses have uniform flow and exhibit little morphological diversity, therefore have been assigned **Low** hydromorphology sensitivity values.



Hydrology and Flood Risk

3.1.99 The hydraulic model indicates that the 1:200 flood extents for both watercourses covers uncultivated land; therefore, a **Low** sensitivity value has been assigned.

Allt Coire Chuirn (MW7.22 Hydro ID 59)

Water Quality

- 3.1.100 The Allt Coire Chuirn has a catchment area of approximately 3.602km² and a length of 4.3km, generally flowing in a north-westerly direction, crossing under the existing A9 and NCN7 before discharging into the River Truim at NGR 263167 780815. A **High** sensitivity value has been assigned for both water quality and biodiversity, given that there are likely to be only a small proportion of pollutant sources and as ecological permeability is facilitated within the span bridge crossing.
- 3.1.101 BGS data indicates that the Allt Coire Chuirn is situated within a high groundwater vulnerability zone (Class 4); therefore, it has been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.102 The Allt Coire Chuirn is located within a steep sided V- shaped valley and an extensive sediment supply from the upper catchment is transported and deposited along a major alluvial fan. The fan is largely contained within the channel, which helps contribute towards active morphological processes and further sediment production. The existing A9 crossing creates a pinch-point which restricts the passage of sediment and debris movement; therefore, a **High** sensitivity value has been assigned for the hydromorphology of the Allt Coire Chuirn.

Hydrology and Flood Risk

3.1.103 The hydraulic model indicates that the Allt Coire Chuirn is associated with inundation of the HML railway embankment during a 1:200 year event and therefore it has been assigned a **High** sensitivity value for hydrology and flood risk.

Unnamed Tributary of River Truim (W7.167 Hydro ID 61, W7.169 Hydro ID 62)

Water Quality

- 3.1.104 These small tributaries are ephemeral in nature and likely to receive an input of either untreated or partially treated road runoff. The vegetated channels have negligible flow recorded during the site visit and the oversized culverts provide an existing pressure; therefore, a **Low** sensitivity value has been assigned for water quality and biodiversity.
- 3.1.105 BGS data indicates that the watercourses are situated within a high groundwater vulnerability zone (Class 4); therefore, they have been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.106 There is evidence of engineered channel modifications in the form of localised channel straightening downstream of crossing Hydro ID 61. There are signs of some vertical incision as an adjustment related to the channel straightening. Although there is limited flow and sediment supply, during extreme high flow events the channel could act as a distributary channel for the



adjacent Allt Coire Chuirn. The channel has been assigned a **Medium** sensitivity value for hydromorphology. There is little evidence of geomorphological diversity in watercourse W7.169; therefore a **Low** sensitivity value has been assigned.

Hydrology and Flood Risk

3.1.107 The hydraulic model indicates that W7.167 (Hydro ID 61) is associated with inundation of the HML railway embankment during a 1:200 year event, and therefore it has been assigned a **High** sensitivity value for hydrology and flood risk. No flood risk associated with W7.169 is identified; therefore a **Low** sensitivity value has been assigned.

Unnamed Tributary of River Truim (W7.23, Hydro ID 63)

Water Quality

- 3.1.108 The unnamed watercourse has a length of approximately 1km, generally flowing in a north-westerly direction, crossing under the existing A9 and NCN7 before discharging into the River Truim at NGR 263677 781573. It is likely that the watercourse will receive some form of untreated or partially treated road runoff and has been assigned a **Medium** water quality sensitivity value. A **Medium** sensitivity value has also been assigned for biodiversity, given that there are existing pressures from bed protection and the circular culvert at the existing A9 crossing.
- 3.1.109 BGS data indicates that the watercourse is situated within a high groundwater vulnerability zone (Class 4); therefore, it has been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.110 There is evidence of historic channel realignment upstream of the existing A9 crossing, but the existing channel length is similar to the former with little evidence of morphological activity. The issues identified downstream of the crossing are attributable to MW7.23 (Hydro ID 64) i.e. deposition of sediment on reducing slopes by the A9 is causing lateral adjustment. Therefore, a **Medium** sensitivity value has been assigned for hydromorphology.

Hydrology and Flood Risk

3.1.111 The hydraulic model indicates that W7.23 (Hydro ID 63) is associated with inundation of the HML railway embankment during a 1:200 year event, and therefore, has been assigned a **High** sensitivity value for hydrology and flood risk.

Allt Coire Bhotie (MW7.23, Hydro ID 64)

Water Quality

3.1.112 The Allt Coire Bhotie has a catchment area of approximately 1.363km² and a length of 3.1km, generally flowing in a north-westerly direction, crossing under the existing A9 and NCN7 before discharging into the River Truim at NGR 263676, 781545. A **High** sensitivity value has been assigned for water quality given that there are likely to be only a small proportion of pollutant sources relative to watercourse flow. A **Medium** sensitivity value has been assigned for biodiversity, given that there are existing pressures from the twin circular culvert at the existing A9 crossing.



3.1.113 BGS data indicates that the Allt Coire Bhotie is situated within a high groundwater vulnerability zone (Class 4); therefore, it has been assigned a **High** groundwater quality sensitivity value.

Hydromorphology

3.1.114 The Allt Coire Bhotie receives sediment supply from coupled hillslope failures upstream, transported along a steep, confined channel. There is an area of sediment deposition adjacent to a section of channel realignment. Erosion downstream of the crossing has also resulted in channel incision and bank collapse. A High sensitivity has been assigned for the hydromorphology of the Allt Coire Bhotie.

Hydrology and Flood Risk

3.1.115 The hydraulic model indicates that W7.23 (Hydro ID 64) is associated with inundation of the HML railway embankment during a 1:200 year event, and therefore has been assigned a **High** sensitivity value for hydrology and flood risk.

Unnamed Tributary of River Truim (W8.1 Hydro ID 65)

Water Quality

- 3.1.116 The unnamed watercourse has a length of approximately 800m, generally flowing in a north-westerly direction, crossing under the existing A9 and NCN7 before discharging into the River Truim at NGR 263882, 782338. It is likely that the watercourse will receive some form of untreated or partially treated road runoff and has been assigned a **Medium** water quality value. A **Medium** sensitivity value has been assigned for biodiversity, given that there are existing pressures from bed protection and the circular culvert at the existing A9 crossing.
- 3.1.117 The BGS data indicates that the tributary is situated within a medium groundwater vulnerability zone (Class 4) and therefore it has been assigned a **Medium** groundwater quality sensitivity value.

Hydromorphology

3.1.118 The channel morphology is engineered, with bank protection present upstream and downstream of the crossing and a 90° realignment shown parallel to the A9. There is some evidence of partial channel incision in places and deposition of gravels at the crossing location. Therefore, a **Medium** sensitivity value has been ascribed for hydromorphology.

Hydrology and Flood Risk

3.1.119 The DMRB3 hydraulic model indicates that W8.1 Hydro ID 65 is associated with inundation of the HML railway embankment during a 1:200 year event and therefore it has been assigned a **High** sensitivity value for hydrology and flood risk.

Other water features

Private Water Supplies

- 3.1.120 Private water supplies (PWS) are identified within the Project 7 extent and are deemed to be of high sensitivity as they support vital social/economic use. They include supplies at:
 - Dalnaspidal Lodge, Possible Well (ABS 7.7) (ch. 0,100)



- Historical mapping dated between 1900 and 1974 indicated the presence of a well approximately 35m to the west of the existing A9 at ch. 100 near Dalnaspidal. Subsequent CFJV walkover surveys (August 2016 and June 2017) also identified a manhole cover corresponding to the approximate location of the well, but that was unable to be opened and inspected (Drawing 11.1, Volume 3).
- Dalnaspidal Lodge, Dalnaspidal, PWS abstraction from borehole (ABS 7.6) (ch. 0,350)
 - Information received from P&KC and SEPA identified a PWS record supplying properties at and surrounding Dalnaspidal Lodge, located between 150 and 320m to the west of the existing A9 from ch. 200 to ch. 350. This was indicated to be sourced from a borehole located 370m west of the Highland Mainline railway at ch. 250. Consultation with HighWater (Scotland) Ltd provided additional information that the borehole is in fact located approximately 10m west of the Highland Mainline railway and that this feeds five properties at Dalnaspidal. The well is approximately 15m in depth and two submersible pumps within it deliver water to a storage tank via a treatment system (contained within a shed adjacent to Allt Coire Mhic Sith (264505, 773205)) for colour reduction and pH elevation. A booster pump set then delivers the treated water to the properties (**Drawing 11.1, Volume 3**).
- Dalnaspidal Lodge Supply, PWS abstraction from surface water (Allt Coire Mhic-sith (ABS 7.4) (ch. 0,400))
 - Information received from P&KC identified a PWS record supplying properties at and surrounding Dalnaspidal Lodge, located between 150 and 320m to the west of the existing A9 from ch. 200 to ch. 350. This was indicated to be sourced from the Allt Coire Mhic-sith watercourse adjacent to the east side of the existing A9 at ch. 0,400 (**Drawing 11.1**, **Volume 3**).
- Dalnaspidal Lodge Supply, PWS abstraction from surface water (Allt Coire Mhic-sith (ABS 7.5) (ch. 0,400))
 - Information received from P&KC identified a PWS sourced from the Allt Coire Mhic-sith watercourse and supplying The Old Schoolhouse and Station Cottage properties at Dalnaspidal. Resident consultation and feedback confirmed this, identifying the supply to be sourced from the watercourse on the east side of the existing A9 at ch. 400 and that the water is utilised for domestic and consumption purposes (**Drawing 11.1, Volume 3**).
- Balsporran Cottages, PWS abstraction from spring (ABS 7.2) (ch. 6,800)
 - Information received from THC identified a PWS sourced from a spring, supplying Balsporran Cottage, an associated guesthouse and bed and breakfast. Resident consultation confirmed this, with the spring/ stream source located approximately 400m west of the existing A9 carriageway in the Pass of Drumochter beyond the Highland Mainline railway at ch. 6,800 and supplying the domestic property and four letting rooms within the bed and breakfast (**Drawing 11.5, Volume 3**).
- North Drumochter Lodge, PWS abstraction from a spring (at Allt Coire Chaorainn (ABS 7.3) (ch. 7,300))
 - Information received from THC identified an active PWS record supplying the properties/ buildings at Drumochter Lodge in the Pass of Drumochter for use within a deer larder and for domestic purposes. Landowner consultation identified that the supply is sourced from a spring, located approximately 320m to the east of the existing A9 at ch. 7,050. The spring



tank capture system has been utilised to supply these properties for in the region of 100 years (**Drawing 11.6, Volume 3**).

Discharges

3.1.121 Consented point source discharges are identified from CAR licence information received from SEPA (**Table 3**). They include private residential and commercial discharge of septic tank effluent (STE) to soakaways or surface watercourses.

Table 3:	Licenced	Discharges	within	Project 7	7 Extent

Water Features Ref.	Discharge	Chainage (approx.)	Position and Distance from Scheme	Drawing Number (in Volume 3)
DISC 7.1	Dalnaspidal Lodge, Ben Alder Estate, Calvine STE to Soakaway	ch. 0,100	340m south-west	11.1
DISC 7.2	Dalnaspidal, Calvine, Pitlochry STE to soakaway	ch. 0,275	220m south-west	11.1
DISC 7.3	Dalnaspidal Farm Buildings, Pitlochry STE to Soakaway	ch. 0,300	195m south-west	11.1
DISC 7.4	Dalnaspidal Steading, Dalnaspidal, Calvine, Pitlochry STE to soakaway	ch. 0,340	195m south-west	11.1
DISC 7.5	Station Cottages, Point source discharge, receiving water Allt Coire Mhic-sith	ch. 0,600	55m west	11.1
DISC 7.7	Balsporran Cottages, Dalwhinnie STE to soakaway	ch. 6,850	100m west	11.5
DISC 7.8	Drumochter Lodge, Dalwhinnie STE to Soakaway	ch. 7,350	50m east	11.6

4 Water Features Schedule

- 4.1.1 The water feature schedule (**Table 4**) lists the waterbodies identified within the Project 7 study area and provides their assigned reference number, NGR location, and approximate chainage and associated watercourse crossing Hydro ID related to the Proposed Scheme.
- 4.1.2 The schedule also outlines key environmental information relating to the waterbodies including RBMP status (where applicable) and specific designations (e.g. SSSI, SAC, SPA, Drinking Water Protected Area (DWPA)). Justification for scoping-out water features from the environmental assessment is provided and for those subject to the assessment process, sensitivity values are given for the parameters: water quality (surface and groundwater), hydrology and flood risk, and hydromorphology.



Table 4: Water Features Schedule

				Α	Water Feature				Scoped	Scoped Out of			Soneitivity		
					Agree				Asses				Constitution		
Water Feature Ref.	Relevant Hydro ID*	Name/ Description	Category	NGR Easting	NGR Northing	Approx. Chainage From/To	RBMP Classification (2015) Surface water	Located within any Designated boundaries	Y/N? Jr	Justification V	Water Quality (Water Quality (Surface Water) Water Quality Biodiversity	Water Quality (Groundwater)	Hydromorphology	Hydrology & Flood Risk
MW 7.24	۴-	Allt Chaoreach Mor	Major	265890	772607	-1050/-1150	No watercourse-specific information available	DWPA (Groundwater)	ON O	I	Medium	Medium	High	High	Low
MW7.25	-2	Unnamed (tributary of Allt Chaorach Beag)	Major	265675	772761	-350/-875	No watercourse-specific information available	DWPA (Groundwater)	No	1	Medium	Medium	High	High	Low
W 7.27	N/A	unnamed on OS 1: 10000 (tributary of Allt Chaoreach Mor)	Minor	265965	772988	- 850/- 1000	No watercourse-specific information available	DWPA (Groundwater)	ON O	ı	Medium	Medium	High	High	Low
W 7.28	N/A	unnamed on OS 1: 10000 (tributary of Allt Chaoreach Mor)	Minor	265998	772708	-1150	No watercourse-specific information available	DWPA (Groundwater)	O N	ı	Medium	Medium	High	High	Low
W 7.29	N/A	unnamed on OS 1: 10000 (tributary of Allt Chaorach Beag)	Minor	265764	773084	-650/-800	No watercourse-specific information available	DWPA (Groundwater)	ON	I	Medium	Medium	High	High	Low
W 7.30	N/A	Allt Chaorach Beag	Minor	265770	772835	-750/-950	No watercourse-specific information available	DWPA (Groundwater)	o _N	I	Low	High	High	High	Low
W 7.31	<u>-</u>	unnamed on OS 1: 10000 (tributary of River Garry)	Minor	265259	772760	-480	No watercourse-specific information available	DWPA (Groundwater)	o _N	I	Medium	Medium	Medium	Low	Low
MW7.1	N/A	River Garry	Major	264783	772803	-350/-50	Bad (River Garry from Loch Garry to Garry Intake 6912)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	O N	ı	Low	High	High	High	Very High
W 7.1	1	unnamed on OS 1: 10000 (tributary of River Garry)	Minor	264628	772866	100/250	No watercourse-specific information available	DWPA (Groundwater)	No No	I	Medium	Medium	High	Low	High
ABS 7.7	N/A	Dalnaspidal Lodge, Possible Well	Abstraction	264783	773088	100	No watercourse-specific information available	DWPA (Groundwater)	Yes Sch	Outwith Scheme extent	I	ı	ı	I	ı
MW 7.2	N/A	Allt Dubhaig	Major	263868	773427	400/2950	Poor (Allt Coire Dhombain 6610)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	O N	1	Low	High	High	High	Very High
MW 7.3	2	Allt Coire Mhic-sith	Major	264676	773548	450/600	No watercourse-specific information available	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	ON	ı	Medium	Medium	Medium	High	High
W 7.2	N/A	unnamed on OS 1: 10000 (tributary of Allt Dubhaig)	Minor	264123	773397	750/1250	No watercourse-specific information available	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	No	ı	Low	High	High	High	Low
DISC 7.1	N/A	Dalnaspidal Lodge, Ben Alder Estate, Calvine STE to Soakaway	Discharge	264590	772870	150	Poor (River Garry from Loch Garry to Garry Intake 6912)	DWPA (Groundwater)	ON	ı	Low	High	High	High	High
DISC 7.2	N/A	Dalnaspidal, Calvine, Pitlochry STE to soakaway	Discharge	264590	772870	325	Poor (River Garry from Loch Garry to Garry Intake 6912)	DWPA (Groundwater)	O N	ı	Low	High	High	High	High
DISC 7.3	N/A	Dalnaspidal Farm Buildings, Pitlochry STE to Soakaway	Discharge	264590	772870	325	Poor (River Garry from Loch Garry to Garry Intake 6912)	DWPA (Groundwater)	ON.	ı	Low	High	High	High	High
DISC 7.4	N/A	Dalnaspidal Steading, Dalnaspidal, Calvine, Pitlochry STE to soakaway	Discharge	264516	773122	350	Poor (River Garry from Loch Garry to Garry Intake 6912)	DWPA (Groundwater)	O N	ı	Low	High	High	High	High
ABS 7.6	N/A	Dalnaspidal Lodge, Dalnaspidal, PWS abstraction from borehole	Abstraction	264520	773195	350	No watercourse-specific information available	DWPA (Groundwater)	Yes Sch	Outwith Scheme extent	1	1	1	1	1



	Hydrology & Flood Risk	ı	ı	I.	Low	1	J	Low	ſ	High
	Hydromorphology	Hydromorphology -		Í.	Low	1	ı	Low	ſ	High
Sensitivity	Water Quality (Groundwater)		T.	Medium	1	1	Medium	1	Medium	
	Water Quality (Surface Water) Water Quality Biodiversity	ı	ı	T.	Low	ı	ı	Low	ı	Medium
	Water Quality Water Quality	ı	ı	T-	Low	ı	ı	Low	ı	Medium
Scoped Out of Environmental Assessment	Ę	Minor earthworks ditch will be replaced by new Scheme drainage	Minor earthworks ditch will be replaced by new Scheme drainage network	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	Minor ephemeral field drainage is outwith 10m buffer around proposed A9 earthworks extents	Minor earthworks ditch is outwith 10m buffer around proposed A9 earthworks extents	ı	Minor earthworks ditch will be replaced by new Scheme drainage network	ı
Scor Envi Ass	Y/N?	Yes	Yes	Yes	0 2	Yes	Yes	0 2	Yes	N O
	Located within any Designated boundaries	DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills - Protected as SSSI, DWPA (Groundwater)	Drumochter Hills - Protected as SSSI, DWPA (Groundwater)	Drumochter Hills - SSSI; DWPA (Groundwater)	Drumochter Hills - SSSI; DWPA (Groundwater)	Drumochter Hills - SSSI; DWPA (Groundwater)
	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available
	Approx. Chainage From/To			420/490	510/515	510		550/565	570/780	525
Water Feature	NGR Northing	773308		782479	773412	773333	782602	773401	773484	773400
Water Feature	NGR Easting	264646	264664	263992	264530	264474		264506	264422	264500
	Category	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Abstraction
	Name/ Description	Road drainage network (east of A9) meets Hydro ID 2)	Road drainage network (east of A9) meets Hydro ID 2)	Road drainage network (east of A9) meets Hydro ID 2)	unnamed on OS 1: 10000 (tributary of Allt Coire Mhic-sith) identified as earthworks drain and not natural watercourse	unnamed on OS 1: 10000 (tributary of Allt Coire Mhic-sith)	unnamed earthworks ditch (west of A9 alongside railway) discharges d/s of Hydro ID 3	Unnamed on OS 1: 10000 (tributary of Allt Coire Mhic–sith) identified as earthworks drain and not natural watercourse	Unnamed earthworks ditch (east of A9) discharging between W7.40 and W7.41	Dalnaspidal Lodge Supply, Surface watercourse abstraction from Allt Coire Mhic-sith
	Relevant Hydro ID*	N/A	N/A	N/A	m	N/A	N/A	3A	N/A	N/A
	Water Feature Ref.	W 7.34	W 7.35	W 7.36	W 7.37	W 7.38	W 7.39	W 7.40	W 7.41	ABS7.4



									Scop	ed Out of					
					Water Feature				Envir	Environmental Assessment			Sensitivity		
Water Feature Ref.	Relevant Hydro ID*	Name/ Description	Category	NGR Easting	NGR Northing	Approx. Chainage From/To	RBMP Classification (2015) Surface water	Located within any Designated boundaries	¿N/A	E	Water Quality (Surface Water) Water Quality	Surface Water) Biodiversity	Water Quality (Groundwater)	Hydromorphology	Hydrology & Flood Risk
ABS 7.5	N/A	Dalnaspidal Station Cottages Supply (unsurveyed surface water abstraction located on W7.40)	Abstraction	264500	773431	530	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	o N	ı	Low	Гом	Medium		Low
DISC 7.5	N/A	Station Cottages, Point source discharge, receiving water Allt Coire Mhic-sith	Discharge	264390	773390	009	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	N O	ı	Medium	Medium	Medium	High	High
W 7.42	N/A	Unnamed earthworks ditch (west of A9) between Hydro ID 3A and 4	Minor	264345	773442	655	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	1	ı	ı	I
W 7.43	4	Unnamed on OS 1: 10000 (tributary of Allt Dubhaig)	Minor	264288	773524	790/795	No watercourse-specific information available	Drumochter Hills - SSSI; SAC; DWPA (Groundwater)	N _O	I	Low	Low	Medium	Low	Low
W 7.44	N/A	Unnamed earthworks ditch (west of A9) between Hydro ID 4 and 5	Minor	264209	773555	785/855	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	1	I	ı	1
W 7.46	N/A	Unnamed earthworks ditch (west of A9) between road and W 7.44	Minor	264210	773601	098	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	ſ	I	ı	ı	1
W 7.47	N/A	Unnamed earthworks ditch (west of A9) between road and W 7.44	Minor	264187	773624	905	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	1	1	ı	1
W 7.48	N/A	Unnamed earthworks ditch (west of A9) between Hydro ID 4 and 5	Minor	264530	773412	800/910	No watercourse-specific information available	Drumochter Hills - Protected as SSSI, DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	1	1	1	I	1
W 7.49	N/A	Unnamed earthworks ditch (east of A9) between Hydro ID 4 and 5	Minor	264248	773678	890/905	No watercourse-specific information available	Drumochter Hills - SSSI; SAC; SPA; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	I	I	I	ı	1
W 7.50	5	Unnamed (tributary of Allt Dubhaig)	Minor	264218	773785	970	No watercourse-specific information available	Drumochter Hills - SSSI, SAC, SPA; DWPA (Groundwater)	No	ı	Low	Low	Medium	Low	Low
W7.3	9	Unnamed watercourse (identified as drain on OS 1:10 000 map)	Minor	264115	773863	1150	No watercourse-specific information available	Drumochter Hills - SSSI, SAC, SPA; DWPA (Groundwater)	o N	1	Low	Low	Medium	Low	Low



									Scop	ed Out of					
					Water Feature	Ф			Envir	Environmental Assessment			Sensitivity		
Water Feature Ref.	Relevant Hydro ID*	Name/ Description	Category	NGR Easting	NGR Northing	Approx. Chainage From/To	RBMP Classification (2015) Surface water	Located within any Designated boundaries	Y/N?	Justification	Water Quality (Water Quality (Surface Water) Water Quality Biodiversity	Water Quality (Groundwater)	Hydromorphology	Hydrology & Flood Risk
W 7.51	N/A	Unnamed earthworks ditch (east of A9) between Hydro ID 5 and 6	Minor	264143	773798	985/1145	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	1	I	ı	1
W 7.52	N/A	Unnamed earthworks ditch (east of A9) between Hydro ID 6 and 7	Minor	264066	773889	1150/1215	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	1	1	1	-	1
W 7.53	N/A	Unnamed earthworks ditch (east of the A9) which feeds into Hydro ID 7	Minor	264061	773923	1225/1235	No watercourse – specific information available	Drumochter Hills - SSSI; SPA; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	1	1	1	-	1
W 7.54	7	Unnamed on OS 1: 10 000 (tributary of Allt Dubhaig)	Minor	263940	773916	1250/1260	No watercourse – specific information available	Drumochter Hills - SSSI; SPA; DWPA (Groundwater)	No	ı	Low	ГОМ	Medium	Low	Low
W 7.55	N/A	Unnamed earthworks ditch (east of A9) diverted towards Hydro ID 7	Minor	263994	774006	1255/1325	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	1	ı	ı	-	1
W 7.56	N/A	Unnamed earthworks ditch (east of A9) between Hydro ID 7 and 8	Minor	263954	774059	1330/1500	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	1	1	1	1
W 7.57	V/N	Unnamed earthworks ditch (east of A9) linked to Hydro ID 8	Minor	263868	774149	1500/1520	No watercourse-specific information available	Drumochter Hills - SSSI; DWPA (Groundwater)	, kes	Minor earthworks ditch will be replaced by new Scheme drainage network	1	1	1	I	1
W 7.58	N/A	Unnamed earthworks ditch (east of A9) linked to Hydro ID 8	Minor	263851	774238	1500/1600	No watercourse-specific information available	Drumochter Hills - Protected as SSSI, SPA, SAC, DWPA (Groundwater)	Yes	Minor ephemeral channel will be replaced by new Scheme drainage network	1	1	ı	1	1
W 7.59	N/A	Unnamed earthworks ditch (east of A9) linked to Hydro ID 8	Minor	263851	774238	1550/1690	No watercourse-specific information available	Drumochter Hills - Protected as SSSI, DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage	ı	ı	I	1	ı



	Hydrology & Flood Risk	High	Low	1	Low	High	Low	I	Low	1	1	High	ı
	Hydromorphology	High	Low	1	Medium	High	Medium	1	Low	1	1	Low	1
Sensitivity	Water Quality (Groundwater)	Very High	Medium	1	Medium	Very High	Medium	-	Medium	-	1	Medium	1
	Water Quality (Surface Water) Water Quality Biodiversity	Medium	ГОМ	1	Гом	Гом	Гом	1	Low	1	1	Low	1
	Water Quality Water Quality	Medium	Medium	1	Medium	Medium	Low	1	Low	1	1	Low	ı
Scoped Out of Environmental Assessment	Justification	ı	ı	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	I	ı	Minor earthworks ditch will be replaced by new Scheme drainage network	1	Minor earthworks ditch will be replaced by new Scheme drainage network	Minor earthworks ditch will be replaced by new Scheme drainage network	-	Minor earthworks ditch will be replaced by new Scheme drainage network
Scol Envi	Y/N?	ON	ON	Yes	ON	o N	ON	Yes	No	Yes	Yes	No	Yes
	Located within any Designated boundaries	Drumochter Hills - Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills - Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills - Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills - Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills - Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills - Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills - Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)
	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific linformation available
	Approx. Chainage From/To	1400/1880	1680	1680/1880	1900	2000/2050	2080/2090	2035/2190	2180/2185	2030	2310	2450	2455
Water Feature	NGR Northing	774278	774228	774206	774440	774653	774655	774718	774716	774845	774845	774995	774969
	NGR Easting	264001	263733	263883	263582	263850	263575	263600	263545	263473	263473	263401	263375
	Category	Major	Minor	Minor	Major	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor
	Name/ Description	Allt Ruidh nan Sgoilearan	Unnamed on OS 1: 10 000 (tributary of Allt Dubhaig)	Unnamed earthworks ditch (east of A9) between Hydro ID 10 and 12	Unnamed on OS 1: 10 000 (tributary of Allt Dubhaig)	Allt Fuar Bheann	Unnamed on OS 1: 10 000 (tributary of Allt Fuar Bheann)	Unnamed earthworks ditch (east of A9) between Hydro ID 14 and 15	Unnamed tributary of Allt Fuar Bheann)	Unnamed (ephemeral channel)	Unnamed (ephemeral channel)	Unnamed (tributary of Allt Dubhaig)	Unnamed (earthworks drain feeding towards Hydro ID 17)
	Relevant Hydro ID*	8	10	N/A	12	13	14	N/A	15	N/A	N/A	17	N/A
	Water Feature Ref.	MW 7.4	W 7.60	W 7.61	MW 7.5	MW 7.6	W 7.62	W 7.63	W7.64	W7.65	W7.66	W 7.5	W7.67



					Water Feature	o.			Scop	Scoped Out of Environmental			Sensitivity		
Water						Approx.			Ass		Vater Quality (Water Quality (Surface Water)			
Feature Ref.	Relevant Hydro ID*	Name/ Description	Category	NGR Easting	NGR Northing	Chainage From/To	RBMP Classification (2015) Surface water	Located within any Designated boundaries	YN?	Justification	Water Quality	Biodiversity	Water Quality (Groundwater)	Hydromorphology	Hydrology & Flood Risk
W7.68	N/A	Unnamed (earthworks drain feeding towards Hydro ID 17)	Minor	263374	774968	2445/2470	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	ı	1	I	1
W 7.69	N/A	Unnamed (earthworks drain feeding towards Hydro ID 17)	Minor	263366	775017	2480/2525	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Yes	Minor earthworks ditch will be replaced by new Scheme drainage network	ı	ı	ı	I	1
W 7.70	18	Unnamed (tributary of Allt Dubhaig)	Minor	263355	775073	2520/2540	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	ON O	ı	Low	Low	Medium	Medium	High
W7.71	N/A	Unnamed (earthworks ditch which feeds into Hydro ID 18)	Minor	263449	775085	2525/2555	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	Í	ı	1	ı	1
W7.72	N/A	Unnamed (earthworks ditch which feeds into Hydro ID 20)	Minor	263410	775156	2565/2705	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	1	ı	I	1	1
W 7.74	20	Unnamed (tributary of Allt Dubhaig)	Minor	263375	775229	2700/2705	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	No	I	Low	Low	Medium	Low	Low
W7.75	N/A	Unnamed (earthworks ditch feeding towards Hydro ID 20)	Minor	263368	775263	2580/2775	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	ı	ı	ı	I	1
W7.76	21	Unnamed (tributary of Allt a'Chaorainn)	Minor	263305	775297	2780	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	No	ı	Low	Low	Medium	Low	Low
W7.78	22	Unnamed (tributary of Allt a' Chaorainn)	Minor	263332	775373	27850/2865	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	ON	ı	Low	Low	Medium	Low	Low
77.7 W	N/A	Unnamed (earthworks ditch discharging into Hydro ID 21)	Minor	263347	775337	2700/2850	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	ı	ı	ı	ı	1
W7.79	N/A	Unnamed (earthworks ditch discharging into Hydro ID 23)	Minor	263315	775449	2850/3000	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	ı	ı	ı	ı	1
WW7.9	23	Allt a' Chaorainn	Major	263486	775629	2900/3100	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	o N	ı	Medium	Low	Very High	High	Very High
W 7.80	N/A	Unnamed (earthworks ditch between Hydro ID 25 and Hydro ID 23)	Minor	263252	775572	3000/3160	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	I	ı	ı	ı	ı



	ō												
	Hydrology & Flood Risk	Pow	ı	ı	Low	ГОМ	I	ı	I	ı	Very High	ı	Гом
	Hydromorphology	Гом	1	1	Medium	Medium	1	1	I	1	High	1	Гом
Sensitivity	Water Quality (Groundwater)	Medium	Í	-	Medium	Medium	1	1	1	-	Medium	ı	Medium
	Water Quality (Surface Water) Water Quality Biodiversity	Pow	ſ	ı	Low	Low	ı	ı	1	1	Medium	ı	Low
	Water Quality (Low	I	1	Low	Low	1	1	1	1	Medium	1	Low
Scoped Out of Environmental Assessment	u.	ı	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	I	ı	Minor ephemeral channel	Drainage will be replaced by new Scheme drainage network	Minor ephemeral field drainage is outwith 10m buffer around proposed A9 earthworks extents	Minor ephemeral field drainage is outwith 10m buffer around proposed A9 earthworks extents	I	Minor ephemeral drain is outwith 10m buffer around proposed A9 earthworks extents	ı
Scol Envi Ass	Y/N?	o _N	Yes	Yes	ON	No	Yes	Yes	Yes	Yes	o N	Yes	O N
	Located within any Designated boundaries	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as DWPA, (Groundwater)	Drumochter Hills Protected as DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA (Groundwater)
	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available
0	Approx. Chainage From/To	3180	3175/3325	3340/3400	3335	4435/4440	3450	3450/3625	3440	3440	2900/3210	3500	3670/3675
Water Feature	NGR Northing	775668	775760	775878	775829	775921	775949	775965	775909	775920	775432	775816	776097
	NGR Easting	263185	263231	263209	263157	263144	263188	263184	263131	263129	263082	263152	263064
	Category	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Major	Minor	Minor
	Name/ Description	Unnamed (tributary of Allt Dubhaig) identified as earthworks drain and not natural watercourse	Unnamed (earthworks ditch between Hydro ID 25 and Hydro ID 27)	Unnamed (earthworks ditch between Hydro ID 25 and Hydro ID 27)	Unnamed (tributary of Allt Dubhaig)	Unnamed (Tributary of Allt Dubhaig)	Unnamed (tributary watercourse of Hydro ID 28)	Unnamed (earthworks ditch between Hydro ID 28 and Hydro ID 30)	Unnamed (ephemeral channel adjacent to Hydro ID 28)	Unnamed (ephemeral channel adjacent to Hydro ID 28)	Unnamed (tributary of Allt Dubhaig)	Unnamed (ephemeral drain)	Unnamed (tributary of River Truim)
	Relevant Hydro ID*	25	N/A	N/A	27	28	N/A	N/A	N/A	N/A	N/A	N/A	30
	Water Feature Ref.	W7.81	W7.82	W7.83	W7.6	W7.84	W7.85	W 7.86	W 7.87	W 7.88	MW7.10	W7.7	W7.89



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	Hydrology & Flood Risk	I	Very High	Very High	1	Very High	Low	Low	1	I	I	1	1	Low	1
	Hydromorphology	1	High	High	I	Medium	Low	Low	1	1	I	1	1	Low	I
Sensitivity	Water Quality (Groundwater)	1	Low	High	1	High	High	High	I	-	ı	-	-	High	1
	Water Quality (Surface Water) Water Quality Biodiversity	ı	High	Low	ı	Low	Low	Low	1	ſ	ı	ľ	ı	Low	ı
	Water Quality (I	High	Medium	ı	Low	Low	Low	1	I	-	-	1	Low	1
Scoped Out of Environmental Assessment	Justification	Drainage will be replaced by new Scheme drainage network	ı	ı	Drainage will be replaced by new Scheme drainage network	I	ı	ı	Minor ephemeral field drainage is outwith 10m buffer around proposed A9 earthworks extents	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	The feature is a minor ephemeral drainage ditch	Drainage will be replaced by new Scheme drainage network	ı	Feature is a minor ephemeral channel
Sco Env Ass	Y/N?	Yes	o N	N O	Yes	o N	o N	N O	Yes	Yes	Yes	Yes	Yes	o N	Yes
	Located within any Designated boundaries	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)
Water Feature	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available
	Approx. Chainage From/To	3620/3700	3750/3950	3770	3800/3950	2850/3860	3950	3950/3955	4065	4025/4075	4020	4125	4200	4250/4260	4280/4350
	NGR Northing	776124	776200	776331	776310	776329	776421	776421	776523	776541	776584	776567	776668	776701	776773
	NGR Easting	263130	262872	263328	263027	263058	263034	263036	262949	262946	262978	262914	262947	262870	262909
	Category	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor
	Name/ Description	Unnamed (earthworks ditch between W7.48 (Hydro ID 30 and MW7.11 Hydro ID 31)	Unnamed (headwater tributary of River Truim)	Allt an Creagach	Unnamed (earthworks ditch discharging into Hydro ID 34)	Unnamed (tributary of River Truim)	Unnamed (tributary of River Truim)	Unnamed (tributary of River Truim)	Unnamed (ephemeral drain)	Unnamed (earthworks ditch draining between W7,96 and W7.99)	Unnamed (earthworks ditch adjacent to Hydro ID 34)	Unnamed (ephemeral channel on west side of A9)	Unnamed (earthworks ditch which drains towards Hydro ID 36)	Unnamed (tributary of River Truim)	Unnamed (ephemeral channel which feeds into earthworks ditch between Hydro ID 36 and 37)
	Relevant Hydro ID*	V/A	N/A	31	N/A	33	34	35	N/A	V/A	N/A	N/A	N/A	36	N/A
	Water Feature Ref.	W7.91	W7.8	MW7.11	W 7.92	W7.93	W7.94	W7.95	W7.96	W7.97	W7.98	W7.99	W7.100	W7.101	W7.102



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	Hydrology & Flood Risk	I	T.	Гом	A/N	Low	1	Low	Low	I	ı	ı	ı	I	Low
	Hydromorphology	ı	T.	Low	N/A	Low	ı	Low	Low	1	1	I	I	ſ	Low
Sensitivity	Water Quality (Groundwater)	1	ť.	High	High	High	ı	High	High	-	-	ı	ı	ı	High
	Water Quality (Surface Water) Water Quality Biodiversity	ı	Ĺ	гом	N/A	Low	ı	Low	ГОМ	-	ı	ı	ı	ı	Гом
	Water Quality Water Quality	ı	ı	Low	N/A	Low	ı	Low	Low	ı	ı	I	ı	ı	Low
Scoped Out of Environmental Assessment	Justification	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	I	I	I	Drainage will be replaced by new Scheme drainage network	I	I	Drainage will be replaced by new Scheme drainage network	The feature is a minor ephemeral drainage ditch	The feature is a minor ephemeral drainage ditch	The feature is a minor ephemeral drainage ditch	Drainage will be replaced by new Scheme drainage network	1
Scoped Out o Environments Assessment	¿N/A	Yes	Yes	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes	oN
	Located within any Designated boundaries	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, DWPA,
e	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific
	Approx. Chainage From/To	4325/4350	4380	4400	4450	4490/4500	4490/4540	4555/4560	4690/4695	4700/4850	4780	4850	4875	4920/4950	4955/4960
Water Feature	NGR Northing	776794	776813	776827	776842	776927	776952	777021	777096	777141	777191	777270	777292	777340	777353
	NGR Easting	262902	262890	262797	262690	262769	262828	262744	262717	262745	262726	262707	262706	262664	262648
	Category	Minor	Minor	Minor	Pond	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor
	Name/ Description	Unnamed (earthworks ditch between Hydro ID 36 and 37)	Unnamed (earthworks ditch between Hydro ID 36 and 37)	Unnamed (tributary of River Truim)	Pond (west of River Truim)	Unnamed (tributary of River Truim)	Unnamed (earthworks ditch between Hydro ID 38 and 39)	Unnamed (tributary of the River Truim)	Unnamed (tributary of the River Truim)	Unnamed (earthworks ditch draining towards Hydro ID 40)	Unnamed (ephemeral channel draining towards Hydro ID 40)	Unnamed (ephemeral channel draining towards Hydro ID 40)	Unnamed (ephemeral channel)	Unnamed (earthworks ditch draining towards Hydro ID 42)	Unnamed (tributary of River Truim)
	Relevant Hydro ID*	N/A	N/A	37	N/A	38	N/A	39	40	N/A	N/A	N/A	N/A	N/A	42
	Water Feature Ref.	W7.103	W7.104	W7.105	P7.1	W7.106	W7.107	W7.108	W7.109	W7.110	W7.111	W7.112	W7.113	W7.114	W7.115



					Water Feature	G.			Sco Envi Ass	Scoped Out of Environmental Assessment			Sensitivity		
Water Feature Ref.	Relevant Hydro ID*	Name/ Description	Category	NGR Easting	NGR Northing	Approx. Chainage From/To	RBMP Classification (2015) Surface water	Located within any Designated boundaries	Y/N?	Justification	Water Quality (Water Quality (Surface Water) Water Quality Biodiversity	Water Quality (Groundwater)	Hydromorphology	Hydrology & Flood Risk
W7.116	N/A	Unnamed (ephemeral channel)	Minor	262589	777369	4980	No watercourse-specific information available	Drumochter Hills Protected as SSSI, SAC, DWPA, (Groundwater)	Yes	The feature is a minor ephemeral ditch	ı	1	ı	1	ı
W7.117	N/A	Unnamed (earthworks ditch between railway and western verge of the A9)	Minor	262588	777394	5020	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	ı	ı	-	1	ı
W7.118	N/A	Unnamed (ephemeral channel)	Minor	262579	777416	4035	No watercourse-specific information available	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Yes	The feature is a minor ephemeral ditch	ı	1	-	1	1
W7.119	N/A	Unnamed (ephemeral channel)	Minor	262576	777425	5060	No watercourse-specific information available	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Yes	The feature is a minor ephemeral ditch	1	1	-	1	ı
W7.120	N/A	Unnamed (earthworks ditch draining towards Hydro ID 42)	Minor	262647	777425	4950/5175	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	1	ı	1	1	ı
W7.121	N/A	Unnamed (earthworks ditch)	Minor	262586	777567	5180/5190	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	1	ı	1	1	ı
W7.122	N/A	Unnamed (earthworks ditch)	Minor	262590	777621	5230/5250	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	1	ı	1	1	ı
W7.123	N/A	Unnamed (ephemeral channel)	Minor	262576	777632	5250	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	1	ı	ı	1	ı
W7.124	N/A	Unnamed (earthworks ditch)	Minor	262580	777705	5250/5335	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	1	ı	-	1	ı
W7.125	N/A	Unnamed (earthworks ditch)	Minor	262586	777761	5390	No watercourse-specific information available	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Yes	Not likely to be affected by Scheme	1	1	-	ı	ı
W7.126	N/A	Unnamed (earthworks ditch)	Minor	262567	777865	5490/5600	No watercourse-specific information available	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Yes	Drainage will be replaced by new Scheme drainage network	1	ı	-	1	ı
W7.127	N/A	Unnamed (ephemeral channel)	Minor	262571	777918	5520/5550	No watercourse-specific information available	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Yes	The feature is a minor ephemeral ditch	1	1	ı	1	ı
W7.128	N/A	Unnamed (ephemeral channel)	Minor	262556	778057	5685	No watercourse-specific information available	Drumochter Hills Protected as SSSI, SAC, DWPA, (Groundwater)	Yes	The feature is a minor ephemeral ditch	I	1	1	1	ı



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	Hydrology & Flood Risk	ı	ı	I	I	ı	High	High	High	ı	I	Low	ı
	Hydromorphology	1	1	1	1	1	High	Low	Low	1	1	Low	1
Sensitivity	Water Quality (Groundwater)	1	1	1	ı	1	High - (Upper Spey Sand and Gravel 150814)	High	High	-	_	High	1
	Water Quality (Surface Water) Water Quality Biodiversity	1	1	1	I	I	Very High	Low	Low	1	-1	Low	1
	Water Quality (-	1	1	I	I	High	Low	Low	-	-	Low	1
Scoped Out of Environmental Assessment	Justification	Drainage will be replaced by new Scheme drainage network	The feature is a minor ephemeral ditch	1	I	I	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	_	Minor ephemeral channel will be replaced by new Scheme drainage network			
Scc Env As	Y/N?	Yes	Yes	Yes	Yes	Yes	No	o _N	o N	Yes	Yes	No	Yes
	Located within any Designated boundaries	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	River Spey SAC; Drumochter Hills - SAC, SSSI; DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSS, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SPA, DWPA, (Groundwater)
Water Feature	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	Good ecological potential (Heavily Modified) - (River Truim from source to Allt Cuaich confluence 23638)	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available			
	Approx. Chainage From/To	5680/5730	5750/5850	5850/5880	5980	6050	3750/25350	5500/6150	6270	6300/6450	6455/6525	6470/6475	6525/6600
	NGR Northing	778073	778190	778244	778337	778415	776680	777926	778628	778790	778844	778824	778912
	NGR Easting	262562	262579	262585	262588	262601	262840	262963	262683	262728	262759	262684	262768
	Category	Minor	Minor	Minor	Minor	Minor	Major	Minor	Minor	Minor	Minor	Minor	Minor
	Name/ Description	Unnamed (earthworks ditch)	Unnamed (earthworks ditch)	Unnamed (earthworks ditch)	Unnamed (ephemeral channel)	Unnamed (ephemeral channel)	River Truim	Unnamed (Tributary of River Truim)	Unnamed (tributary of River Truim)	Unnamed (earthworks ditch which drains into Hydro ID 45)	Unnamed (earthworks ditch which drains into Hydro ID 45)	Unnamed (Tributary of River Truim)	Unnamed (earthworks ditch which drains into Hydro ID 46)
	Relevant Hydro ID*	N/A	N/A	N/A	N/A	N/A	N/A	43	44	N/A	N/A	45	N/A
	Water Feature Ref.	W7.129	W7.130	W7.131	W7.132	W7.133	MW 8.1	W7.9	W7.134	W7.135	W7.136	W7.137	W7.138



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	Hydrology & Flood Risk	ı	ı	I	I	I	Low	Low	ı	ı	Low
	Hydromorphology	ı	ı	1	ı	1	Low	Low	I	I	Low
Sensitivity	Water Quality (Groundwater)	ı	1	1	1	1	High	High	1	1	High
	Water Quality (Surface Water) Water Quality Biodiversity	ı	I	ı	1	ı	Гом	Low	ı	ı	Low
	Water Quality Water Quality	ı	ı	1	1	1	Low	Low	ı	ı	Low
Scoped Out of Environmental Assessment	Justification	Minor ephemeral channel will be replaced by new Scheme drainage network	Minor ephemeral channel will be replaced by new Scheme drainage network	Minor ephemeral channel will be replaced by new Scheme drainage network	Minor earthworks ditch will be replaced by new Scheme drainage network	Minor earthworks ditch will be replaced by new Scheme drainage network	I	1	Minor ephemeral channel will be replaced by new Scheme drainage network	Minor ephemeral channel will be replaced by new Scheme drainage network	1
Sco Env As:	Y/N?	Yes	Yes	Yes	Yes	Yes	No	N _O	Yes	Yes	No
	Located within any Designated boundaries	Drumochter Hills Protected as SSSI, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)
	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available
	Approx. Chainage From/To	6610	6625	6635/6640	6630/6650	6650/6670	6620	6745/6750	6715	6775/6810	6820/6825
Water Feature	NGR Northing	778931	778954	778966	778973	779003	778958	779121	779053	779121	779137
	NGR Easting	262780	262787	262797	262801	262809	262739	262851	262808	262851	262849
	Category	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor
	Name/ Description	Unnamed (ephemeral channel which drains into Hydro ID 46)	Unnamed (ephemeral channel which drains into Hydro ID 46)	Unnamed (ephemeral channel which drains into Hydro ID 46)	Unnamed (earthworks ditch which discharges into Hydro ID 46)	Unnamed (earthworks ditch which discharges into Hydro ID 47)	Unnamed (tributary of River Truim)	Unnamed (tributary of River Truim)	Unnamed (ephemeral channel which discharges into Hydro ID 47)	Unnamed (ephemeral channel which discharges into Hydro ID 49)	Unnamed (tributary of River Truim)
	Relevant Hydro ID*	N/A	N/A	N/A	N/A	N/A	46	47	N/A	N/A	49
	Water Feature Ref.	W7.139	W7.140	W7.141	W7.142	W7.145	W7.146	W7.147	W7.148	W7.149	W7.150



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	Hydrology & Flood	Risk	ı	Low	High	Very High	High	Very High	I	Very High	N/A	N/A	Very High	Very High	Very High	Low	Very High
	Hydromorphology	rydiolliollogy	1	Low	Medium	High	High	High	1	Low	N/A	N/A	High	High	High	Low	Medium
Sensitivity	Water Quality	(Groundwater)	ı	High	High	High	High	1	ı	High	Very High	Very High	High	High	High	High	High
	Water Quality (Surface Water)	Biodiversity	ı	Low	Low	High	High	High	1	Low	N/A	N/A	High	High	High	Low	Medium
	Water Quality (Water Quality	1	Low	Low	Medium	High	High	I	Low	N/A	N/A	Medium	Medium	Medium	Low	Medium
Scoped Out of Environmental Assessment	lustification	Justinication	Earthworks channel will be replaced by new Scheme drainage network	1	I	I	1	1	Minor earthworks ditch will be replaced by new Scheme drainage network	1	1	I	L	I	I	I	-
Sco Env As:	VINO	i NI	Yes	No	o N	o N	No	No	Yes	No	o N	o N	No	No	No	N N	No
	Located within any	Designated boundaries	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSS, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSS, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as DWPA, (Groundwater)	Drumochter Hills Protected as DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as DWPA, (Groundwater)	Drumochter Hills Protected as SSS, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, SAC, SPA, DWPA, (Groundwater)	Drumochter Hills Protected as DWPA (Groundwater)	Drumochter Hills Protected as DWPA (Groundwater)
Q	RBMP Classification (2015)	Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available
	Approx.	From/To	2610/2635	0289	7000	6950/7350	6825	6825	7125/7200	7245	0069	0269	6900/7250	7305	7325	7270/7275	7300/7500
Water Feature	NGR	Northing	779150	779150	779321	779074	779189	779193	779461	779559	779086	779190	779362	779590	779610	779566	779644
	NGR	Easting	262856	262856	262895	263342	262737	262695	262954	262970	263200	263039	263132	263160	263070	262975	262949
s	Category	Category	Minor	Minor	Minor	Major	Minor	Minor	Minor	Minor	Minor	Minor	Major	Minor	Discharge	Minor	Minor
	Name/ Description	Name/ Description	Unnamed (earthworks ditch which discharges into Hydro ID 49)	Unnamed (tributary of River Truim)	Unnamed (tributary of Rover Truim)	Allt Coire Chaorainn	Balsporran Cottages, Dalwhinnie STE to soakaway	Balsporran Cottages, Private Water Supply. Abstraction from tributary of River Truim	Unnamed (earthworks ditch which drains towards Hydro ID 52)	Unnamed (tributary of River Truim)	Pond (upstream source of MW7.19, assumed to be groundwater fed)	Pond (assumed to be groundwater fed)	Unnamed (tributary of River Truim and Hydro ID 52 Allt Coire Chaorainn)	North Drumochter Lodge, Private Water Supply Abstraction from Allt Coire Chaorainn	Drumochter Lodge, Dalwhinnie STE to Soakaway	Unnamed (tributary of River Truim) identified as earthworks drain and not natural watercourse	Unnamed (tributary of River Truim)
	Relevant	Hydro ID*	N/A	20	51	52	N/A	N/A	N/A	53	N/A	N/A	N/A	N/A	N/A	54	N/A
	Water	Ref.	W7.151	W7.152	W7.15	MW7.18	DISC 7.7	ABS7.2	W7.153	W7.154	P7.2	P7.3	MW7.19	ABS7.3	DISC7.8	W7.155	W7.16



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	Hydrology & Flood Risk	ГОМ	Low	High	1	1	1	1	I	1	T ^o	I	Гом	High
	Hydromorphology	Low	Low	Medium	ı	1	1	1	ı	1	1.	ı	Low	High
Sensitivity	Water Quality (Groundwater)	High	High	High	ı	ı	1	ı	ı	ı	Í.	ı	High	High
	Water Quality (Surface Water) Water Quality Biodiversity	Low	Low	Medium	I	ı	1	1	ı	1	Í.	ı	ГОМ	High
	Water Quality (Low	Low	Medium	1	-	1	1	_	1	1	_	Low	High
Scoped Out of Environmental Assessment	Justification	1	1	1	Minor ephemeral channel will be replaced by new Scheme drainage network	Earthworks ditch will be replaced by new Scheme drainage network	Earthworks ditch will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	I	ı
Scol Envi	Y/N?	O N	o N	o N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	o _N	N O
	Located within any Designated boundaries	Drumochter Hills Protected as DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, River Spey SAC, DWPA, (Groundwater)
	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available
v	Approx. Chainage From/To	7430	7630	7250/8100	7970	7975/8180	8135/8185	8200/8400	8200/8400	8375/8400	8500/8540	8475/8530	8200	8250/8450
Water Feature	NGR Northing	779718	779909	779929	780236	780332	780441	780582	780588	780611	780735	780752	780499	780269
	NGR Easting	263017	263128	263333	263241	263220	263229	263250	263319	263301	263389	263367	263149	263713
	Category	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Major
	Name/ Description	Unnamed (tributary of River Truim) identified as earthworks drain and not natural watercourse	Unnamed (tributary of River Truim)	Unnamed (tributary of River Truim)	Unnamed (ephemeral channel feeding into Hydro ID 58)	Unnamed (earthworks ditch feeding into Hydro ID 58)	Unnamed (earthworks ditch feeding into Hydro ID 58)	Unnamed (earthworks ditch feeding into Hydro ID 59 Allt Coire Chuirn)	Unnamed (earthworks ditch feeding into Hydro ID 59)	Unnamed (earthworks ditch which feeds into Hydro ID 59)	Unnamed (earthworks ditch which feeds into Hydro ID 60)	Unnamed (earthworks ditch which feeds into Hydro ID 60)	Unnamed (tributary of River Truim)	Allt Coire Chuirn
	Relevant Hydro ID*	55	56	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	58	59
	Water Feature Ref.	W7.156	W7.157	MW7.20	W7.158	W7.159	W7.160	W7.161	W7.162	W7.163	W7.164	W7.165	W7.19	MW7.22



	% Flood															
	Hydrology & Flood Risk	Гом	I	ı	High	Гом	Low	l	ı	High	High	ı	I	ı	Low	Low
	Hydromorphology	гом	ı	ſ	Medium	гом	ГОМ	T	ſ	Medium	чВіН	1	I	ſ	Medium	Medium
Sensitivity	Water Quality (Groundwater)	High	ı	1	High	High	High	1	I	High	High	1	I	I	High	Medium
	Water Quality (Surface Water) Water Quality	Гом	I	1	Гом	Medium	Low	1:	1	Medium	Medium	1	I	1	High	Low
	Water Quality Water Quality	Low	ı	I	Low	Medium	Low	I	I	Medium	High	I	I	I	High	Medium
Scoped Out of Environmental Assessment	Ę	1	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	I	I	1	Drainage will be replaced by new Scheme drainage network	Drainage will be replaced by new Scheme drainage network	I	1	Drainage will be replaced by new Scheme drainage network	Water feature is a minor ephemeral channel	Drainage will be replaced by new Scheme drainage network	I	I
Sco Env As	Y/N?	o N	Yes	Yes	ON	oN	ON	Yes	Yes	N 0	No	Yes	Yes	Yes	No	No
	Located within any Designated boundaries	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA, (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, River Spey SAC, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, River Spey SAC, DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	DWPA (Groundwater)	River Spey SAC, DWPA (Groundwater)	Drumochter Hills Protected as SSSI, DWPA (Groundwater)
	RBMP Classification (2015) Surface water	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse- specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse-specific information available	No watercourse specific information available
v	Approx. Chainage From/To	8555	8550/8650	8700/9100	8450/8700	0516/0006	9115	9270/9310	0896/0086	9270	0386/0086	0896/0086	9490	9275/9660	9250/9300	9450/2100
Water Feature	NGR Northing	780804	780878	781089	780382	781187	781268	781404	781525	780730	781253	781551	781619	781608	781454	781552
	NGR Easting	263351	263434	263604	263721	263572	263658	263779	263814	263729	264207	263813	263789	263814	263660	263878
	Category	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Major	Minor	Minor	Minor	Minor	Minor
	Name/ Description	Unnamed (tributary of River Truim) identified as earthworks drain and not natural watercourse	Unnamed (earthworks ditch between Hydro ID 60 and Hydro ID 61)	Unnamed (earthworks ditch between Hydro ID and Hydro ID 62)	Unnamed (tributary of River Truim)	Unnamed (tributary of River Truim)	Unnamed (tributary of River Truim) identified as earthworks drain and not natural watercourse	Unnamed (earthworks ditch which feeds into Hydro ID 63)	Unnamed earthworks ditch between Hydro ID 64 and Hydro ID 65)	Unnamed Tributary of Allt Coire Bhotie	Allt Coire Bhotie	Unnamed (earthworks ditch between Hydro ID 64 and 65)	Unnamed (ephemeral channel which runs between Hydro Id 64 and 65)	Unnamed (earthworks ditch between Hydro ID 64 and Hydro ID 65)	Unnamed (tributary of River Truim)	Unnamed (tributary of River Truim)
	Relevant Hydro ID*	09	N/A	N/A	61	N/A	62	N/A	N/A	63	64	N/A	N/A	N/A	N/A	65
	Water Feature Ref.	W7.166	W7.167	W7.168	W7.21	W7.22	W7.169	W7.170	W7.171	W7.23	MW7.23	W7.172	W7.173	W7.174	W7.25	W8.1



