



## **OUTLINE CONSTRUCTION MANAGEMENT PLAN**

In respect of

**LANDS AT DAWSON'S DEMENSE, ARDEE**

Prepared by

**GENESIS PLANNING CONSULTANTS**

On behalf of

**MAY ARD DEVELOPMENTS LIMITED**

**JULY 2023**

**Document Control Sheet**

Job Title: Dawson’s Demense, Ardee

Job Number: 2022-31


Report ref: Project Construction Management Plan

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Date: June 2023

Client: Amay Developments

Document Status				
Rev	Purpose of Document	Authored by	Approved by	Review Date
1	Draft	N Carr	R Woods	
2	Final	R Woods	R Woods	07-07-2023

Approval for Issue		
Ronan Woods		

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### **1 INTRODUCTION**

#### **1.1 Overview**

- 1.1.1 This Outline Construction Management Plan (OCMP) has been produced as part of the overall planning application for a development at Dawson's Demense, Ardee.
- 1.1.2 This document presents an outline construction sequence and the likely construction methodologies and techniques that will be applied during the construction of the proposed development.
- 1.1.3 This document seeks to demonstrate for the purposes of planning assessment how required works can be delivered in a logical, sensible and safe manner with the incorporation of specific measures to mitigate the potential impact on people, property and the environment.
- 1.1.4 Nothing stated in this document shall supersede or be taken to replace the terms of any contract documents, the detailed design description issued with the contract tender or any conditions of planning which may be attached by the Planning Authority.
- 1.1.5 This methodology will be required to be specifically established by the appointed contractor prior to commencing works on site. Accordingly this report should be viewed as an outline plan with a site-specific construction management plan to be developed by the main contractor prior to works commencing on site.

#### **1.2 Site context**

- 1.2.1 In terms of the locality the site is located to the eastern environs of Ardee, along the northern side of Hale Street.
- 1.2.2 The site will propose road access via a new entrance on the eastern boundary, which will provide direct access for both vehicular and pedestrian traffic. In terms of existing context the site is bounded by the existing CastleGuard Manor residential development on it's northern boundary, with the east of the site occupied by Ardee Industrial Estate.

#### **1.3 Existing site conditions**

- 1.3.1 In terms of site features the lands have an elongated shape with an overall gross site area of circa 4.02 hectares.
- 1.3.2 In terms of project overview the subject lands are vacant at present and do not represent a sustainable use of zoned lands for an urban location.

#### **1.4 Project description**

- 1.4.1 The proposed residential development provides for a total of 122no. residential units with a mixture of residential types which ranges from semi-detached to duplex units.
- 1.4.2 In terms of services direct connection will be made to the existing foul sewer, water and ESB networks, and surface water will be discharged via on-site attenuation soakaways as part of project works.
- 1.4.3 Vehicular access to the proposed development is from Castleguard Road. Pedestrian and linkages to the proposed development will also be provided. Parking provision within the site will be at street level throughout.
- 1.4.4 For further detail on the proposal please refer to the architectural drawings, design statement and the landscape drawings and particulars which accompany the planning application.



Figure 1 Overall lands as existing



**2 CONSTRUCTION PHASES**

**2.1 Overview**

2.1.1 The overall site will be developed in two phases as below and will deliver 93 units in phase 1 and 36 units in phase 2.

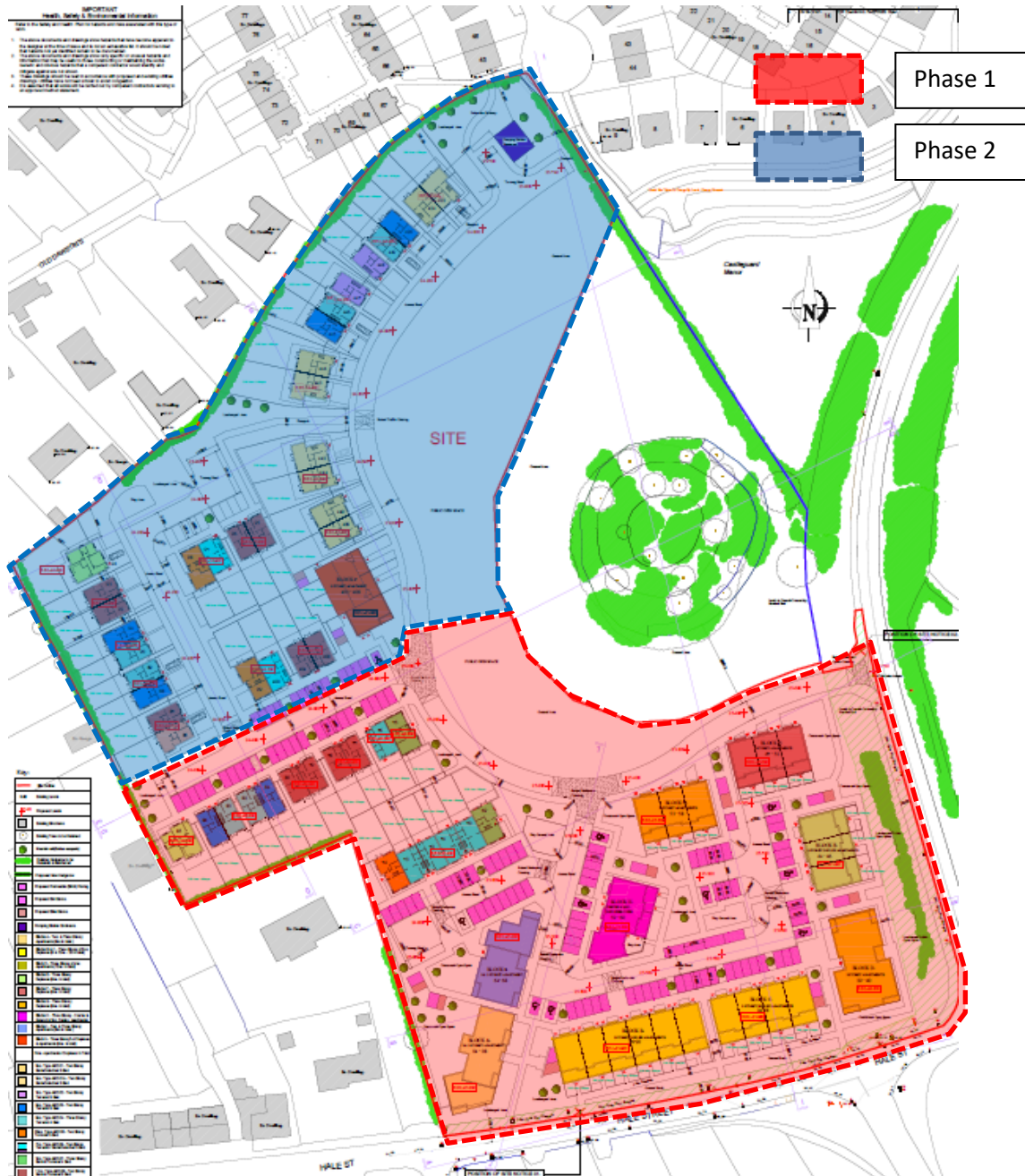


Figure 2 Site layout plan & proposed phasing

2.1.2 The main construction methodology is described in chronological order below.

- Stage 1 - Excavation & site preparation works
- Stage 2 - Substructure works
- Stage 3 - Superstructure works

## 2.2 Stage 1– Excavation & Site Preparation Works

### Service Diversions

- 2.2.1 Where the excavation strategy or temporary works require any temporary diversion of local services or utilities within the site perimeter this will be undertaken strictly with prior agreement of the relevant service providers.

### Excavations

- 2.2.2 As with any construction site a degree of excavation works are required to facilitate proposed ground and floor levels. Where possible, the proposed ground and finished floor levels follow the existing topography to minimise excavations.
- 2.2.3 In terms of excavation works it is noted that the soil and stones derived from such excavation works on-site are not a waste but a by-product as defined by the EPA, per the provisions of article 27(1) of European Communities (Waste Directive) Regulations (2011) which therefore can be reused without treatment either within the works or off site.
- 2.2.4 Further as with any site construction project the main contractor shall develop a system whereby details of all excavations, movement and treatment of excavated materials will be recorded throughout the construction stage of the project. This will ensure full traceability of materials to any final destination(s).
- 2.2.5 Also for the duration of this phase of works across the site area the main contractor shall develop a system whereby details of all excavations, movement and treatment of excavated materials will be recorded throughout the construction stage of the project. This will ensure full traceability of materials to any final destination(s).
- 2.2.6 Any topsoil or excavated stockpiles shall be protected for the duration of the works and not to be located in areas where sediment laden runoff may enter the drainage network.
- 2.2.7 Also in terms of cut and fill volumes this is detailed on the accompanying drawing by ATCE; drawing sheet 22-148-110.

## 2.3 Stage 2 - Substructure works

- 2.3.1 For residential units it is envisaged that standard foundation works will be appropriate.

## 2.4 Stage 3 - Superstructure works

- 2.4.1 On completion of the substructure works the next phase of construction to the superstructure(s) will commence.
- 2.4.2 The materials required for all buildings will be constructed on a sequential basis. Materials will be delivered to site using an 'as required' approach. This will mitigate against traffic congestion as well as reducing the amount of space required for material/vehicle storage on site.
- 2.4.3 Once the building structures in each phase have been largely complete the completion of the facades can commence along with the installation of mechanical and electrical services and building finishes.
- 2.4.4 Final drainage and utilities connections will be completed towards the end of the construction programme.



## **3 SITE MANAGEMENT**

### **3.1 Overview**

3.1.1 Set out below are a number of matters which the main contractor will be required to address during the works.

### **3.2 Health and safety**

3.2.1 The primary aim of planning for safety on this site is ensuring the safety of people involved directly with or affected in the locality by the development. This includes pedestrians, road users, neighbours, site staff and visitors to site.

3.2.2 The following is an overview of typical site-specific issues that will have to be addressed during the construction of the proposed development:

- Managing machinery/crane movements within the site.
- Identifying, storing and handling of hazardous and contaminated materials.
- Protecting site boundaries against damage,.
- Identifying, diverting, maintaining and connecting to existing services.
- Managing vehicular and pedestrian traffic on the surrounding roadways for the duration of the construction works.

3.2.3 Health and safety requirements will be developed within the main contractor's construction management plan and construction stage health and safety plan, prior to the commencement of works on site.

### **3.3 Hours of working**

3.3.1 Hours of construction are to be between the hours of 07:00 and 18:00, Monday to Friday, and 07:00 to 14:00 on Saturdays.

3.3.2 Due to the specific nature of some construction activities, or to mitigate disruption to the local environment, there may be a requirement for working outside these hours. Should this be required, it will be by prior agreement with the Planning Authority.

### **3.4 Public relations**

3.4.1 As the site is located beside existing residential properties the main contractor will be required to ensure that all sub-contractors and suppliers act in a manner to minimise disruption to the surrounding locality.

3.4.2 Keeping people informed of site operations will help create and maintain good relationships, fostering a co-operative atmosphere. A liaison manager will also be appointed by the main contractor to address any issues with neighbours which may arise.

### **3.5 Hoarding**

3.5.1 Where required the hoarding will typically take the form of standard plywood hoarding to a height of two metres as illustrated below. There will also be provision of controlled access points to the site, which will be kept locked for any time the site is not operational. For aesthetic purposes appropriate sections of perimeter fencing and hoarding will contain graphics portraying the project details for visual interest.

- 3.5.2 This will ensure separation of the construction works from the adjoining lands and ensure public safety.



Figure 3 Example of hoarding to be used on site perimeter (which may include graphics of the proposed development)

### 3.6 Site Security

- 3.6.1 The main contractor will be responsible for the security of the site for the duration of the works. Adequate safeguards will be put in place to protect the site, the works, products / materials, plant and any existing buildings affected by the construction works from damage, theft and trespass.
- 3.6.2 The existing site entrance onto Loreto Road as per planning documents will also serve the site for the duration of the construction works. This will also serve as a turnstile/ access point for construction workers.
- 3.6.3 As part of their site security responsibilities, the main contractor will be required to:
- Install and maintain adequate site hoarding to the site boundary with adequately controlled access and egress points.
  - Maintain site security at all times.
  - Install access security in the form of turnstiles and gates for staff.
  - Ensure restricted access is maintained to the works via a fob system being established.
  - Monitor and record all deliveries to the site; along with records of any materials /waste taken off site.
- 3.6.4 All sub-contractors staff will be briefed of the health and safety protocol on-site.



Figure 4 Proposed hoarding line and site entrance

**3.7 Site compound and material storage**

- 3.7.1 The area required for compound and storage space required by the main contractor will be in the proposed open space area.
- 3.7.2 This proposed compound is considered the most pragmatic way forward, as it will enable the development to be constructed and not impact on areas outside of the site confines.
- 3.7.5 As part of project works the main contractor is also responsible for obtaining all necessary consents from relevant statutory bodies, including local authorities, for the disposal of water off site. Standing water should be cleared as soon as is practicable, and the main contractor is to also ensure that there is no hazardous build-up of any water and is to provide for temporary disposal of rainwater from the site during the course of the works. Any water that is potentially contaminated is to be treated on site by way of sediment lagoons, with a discharge licence to be obtained by the contractor from the Planning Authority

**3.8 Craneage**

- 3.8.1 Given the site area available and building heights up to 3 storeys for some apartment blocks then construction works will not require the use of mini tower crane(s) on site.
- 3.8.2 As with such suburban sites mobile teleporters are to be utilised for the main lifting elements of the construction works such as blockwork, roof construction, glazing and balcony installation(s).

**3.9 Dust**

- 3.9.1 A dust minimisation plan will be formulated for the demolition and construction phase of the project. The main contractor shall put in place a regime for monitoring dust levels in the vicinity of the site during works using the Bergerhoff Method (German Standard VDI 2119, 1972). The main contractor shall monitor dust during construction to ensure the limits are not breached throughout the project.

3.9.2 The level of monitoring and adoptions of mitigation measures will vary throughout the construction works depending on the type of activities being undertaken and the prevailing weather conditions at the time. For instance:

- Any hard surface roads shall be swept regularly to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.
- During periods of high winds construction activities likely to generate significant dust emissions should be postponed until weather conditions improve.

### 3.10 **Dirt**

3.10.1 Given the volumes of traffic generated by aspects of the construction works, particularly during the site excavation stage, it shall be a requirement that the main contractor shall provide:

- Provision of a wheel wash facility at the site entrance point. The wheel wash will be a drive-through type and all vehicles will be required to pass through the wheel wash facility before exiting the site.
- The wheel wash must be kept in place and used throughout the critical dirt generating activities of the construction works. Where appropriate, water supplies servicing the wheel wash will be from recycled sources. All waters shall be drained through a sediment lagoon prior to any discharge.

3.10.2 Further the main contractor will be responsible for clearing any blockages of local gullies and drains due to construction materials and will carry out drain clearing as required.

**3.11 Noise & vibration**

3.11.1 The main contractor is required to monitor the baseline noise levels at the site prior to commencement of the project, with a noise monitoring regime being developed for the duration of the construction works on site as part of a Noise and Vibration Management Plan (NVMP). The main contractor shall implement measures to minimise noise levels during construction. Specifically, noise levels shall be kept below those levels specified in table 2, which are a recognised standard for construction sites in accordance with the requirements of BS 5228: 2009 ‘Code of Practice for Noise and Vibration Control on Construction Sites’. (Part 1 and Part 2).

Period of which criterion applies		Noise impact criterion (LAeq/hr)
Monday-Friday	Day: 7.00am to 7.00pm	70dB
	Evening: 7.00pm to 10.00pm	60dB
	Night: 10.00pm to 7.00am	The higher of 45dB or the ambient level
Saturday: Day 7.00 am to 2.00pm		65dB
Sundays & bank holidays: Not applicable as no works to be carried out		60dB

Table 1 Noise limit criteria

3.11.2 Vibration Limits to be applied for the duration of construction works are as set out in BS 5228-2:2009+A1:2014 (Code of Practice for Vibration Control on Construction and Open Sites) and BS 7385: 1993 (Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration). Allowable vibration during the construction phase is summarised below in table 2.

Allowable vibration at the closest part of sensitive properties adjacent		
Less than 4hz	15 to 40 hz	40hz (and above)
12mm/so	12.5mm/so	50mm/so

Table 2 Allowable Vibration (in terms of peak particle velocity) at the closest part of sensitive properties to the source of vibration

3.11.3 A specialist sub-contractor shall also be engaged by the main contractor to monitor, collate and report on vibration results for the duration of critical work activities, as part of a noise and vibration management Plan (NVMP).

3.11.4 A condition attached to planning will ensure the above parameters and best practice(s) are adhered to.



**4 CONSTRUCTION TRAFFIC MANAGEMENT**

**4.1 Construction traffic routes**

- 4.1.1 Given the relatively low number of residential units proposed in each phase it is not anticipated that construction traffic will generate excessive traffic volumes.
- 4.1.2 For the duration of construction works the associated traffic will access the site via Castleguard Road. The figure below shows the proposed route for construction vehicles travelling to and from the site. Given the existing road width and capacity it is considered no issues will arise in terms of traffic movements emanating from construction activities.



Figure 5 Proposed construction traffic routes to/from the site

**4.2 Vehicle movements during construction**

- 4.2.2 As the development is to be carried out over several years this will ensure there are not excessive traffic volumes at any one particular time. In summary, a maximum of 2no. HGV movements per hour are anticipated and workers vehicles attending the site will be arriving outside of any peak traffic periods. Overall construction traffic will be less than traffic volumes generated during the operational phase of the development, and deliveries/HGV movements will only be during construction related hours; 7am to 6pm.



4.2.3 An appropriate traffic management plan will also be developed by the main contractor in consultation with the Planning Authority to ensure safe access and egress procedures are implemented at all times during the works.

4.2.4 A condition attached to planning will ensure the above parameters and best practice(s) are adhered to.

### 4.3 **Staff vehicles & parking**

4.3.1 For the duration of construction the existing site compound site will provide a limited number of spaces for staff parking facilities. Also by virtue of the site area available this will also ensure all required staff parking during construction works can be accommodated within the site.

4.3.2 In terms of periods for traffic movements, given staff traffic will be on-site from 07.00 daily it will not result in any local congestion issues or unregulated parking on adjacent lands.

### 4.4 **Road and footpath maintenance**

4.4.1 A road sweeper will be available on-site at all times to ensure the public road adjacent to the site is maintained clean as required.

### 4.5 **Construction vehicle movements**

4.5.1 Construction related vehicle movements will be minimised by:

- Use of 'just-in-time' approach for removal of materials from the site and equally for delivery of materials to the site.
- Ensuring vehicle intensive operations occur outside of peak traffic periods.
- Providing adequate storage/parking space on-site.
- All off-loading to take place within the site boundary.

## 5 CONSTRUCTION MANAGEMENT

### 5.1 Site works

5.1.1 The main contractor will be responsible for pollution prevention for the duration of the works which will be in accordance with a site-specific construction management plan to be developed by the main contractor prior to works commencing on site.

### 5.2 Water quality & protection

5.2.1 In this regard the following site-specific measures are proposed for all phases of the project:

- Excavation works will be in accordance with the requirements of the Office of Public Works (OPW) and Inland Fisheries Ireland (IFI).
- Pollution prevention measures in accordance with guidance from Inland Fisheries Ireland (2016). This will include the installation sediment traps and culverting of drainage ditches 'in the dry', where required.
- No direct discharges made to storm or land drains where there is potential for cement or residues in discharge.
- Designated impermeable cement washout areas must be provided.
- Any in-situ concrete work to be lined and areas bunded (where possible) to stop any accidental spillage.
- Any spoil or waste material generated from the construction process is to be temporarily stored at an approved location on site, before being removed to an accepting licensed waste disposal facility.
- All new infrastructure is to be installed and constructed to the relevant codes of practice and guidelines.
- All surface water infrastructure is to be pressure tested by an approved method during the construction phase and prior to connection to the public networks, all in accordance with Local Authority Requirements.
- Connections to the public network are to be carried out to the approval and / or under the supervision of the Local Authority prior to commissioning.
- All new sewers are to be inspected by CCTV survey post construction; to identify any possible physical defects for rectification prior to operational phase.
- Care will be required for the environmental management of the site to ensure that no potential contamination issues are experienced which may impact on the overall surface water quality.
- Potential issues can be mitigated against by ensuring that the development's environmental management plan is adhered to prevent accidental on-site oil spillages and the regular maintenance of on-site plant to eliminate potential risks.
- Implement best practice construction methods and practices complying with relevant legislation to avoid or reduce the risk of contamination of watercourses or groundwater.

- Surface water runoff from areas stripped of topsoil and surface water collected in excavations will be directed to on-site settlement ponds where measures will be implemented to capture and treat sediment laden runoff prior to discharge of surface water at a controlled rate.
- Weather conditions and seasonal weather variations will also be taken account of when planning excavations, with an objective of minimizing soil erosion.
- Concrete batching will take place off site or in a designed area with an impermeable surface.
- Concrete wash down and wash out of concrete trucks will take place off site or in an appropriate facility.
- Discharge from any vehicle wheel wash areas is to be directed to onsite settlement ponds.
- Oil and fuel stored on site for construction should be stored in designated areas. These areas shall be bunded and should be located away from surface water drainage and features.
- Refuelling of construction machinery shall be undertaken in designated areas away from surface water drainage in order to minimise potential contamination of the water environment. Spill kits shall be kept in these areas in the event of spillages.
- As fuels and oils are classed as hazardous materials, any on-site storage of fuel/oil, all storage tanks and all draw-off points will be bunded (or stored in double-skinned tanks) and located in the dedicated site compound. Provided that these requirements are adhered to and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.
- Hazardous construction materials shall be stored appropriately to prevent contamination of watercourses or groundwater.
- Dewatering measures should only be employed where necessary.
- In respect of surface water networks, during the construction period the system and traps are to be inspected a minimum 4 times a year as the accumulation of silt is prevalent during this period. The number of inspections should be pro-active and if silting is found to be excessive in any of the apparatus the number of inspections should be raised accordingly and continually monitored and reviewed.
- Pipe ends associated with the surface water network should be blocked/capped off with proprietary fittings until connected to the completed storm-water system.

5.2.2 In respect of disposal of any wastewater from the site, discharge from any vehicle wheel wash areas is to be directed to designated on-site settlement ponds; and any debris or sediment captured by vehicle wheel washes are to be disposed off-site at a licensed facility. In terms of activities associated with concrete deliveries/pours, all 'wash out' of concrete trucks will take place off site and any excess concrete is not to be disposed of on site.

## 5.3 Construction waste management

- 5.3.1 This project is committed to ensuring on-site segregation and on and off-site reuse recycling / recovery in terms of waste materials arising from the project. The appointed contractor shall have regard to pollution prevention measures to be implemented during the construction phase of the proposed works. These will be outlined in a detailed construction waste management plan prepared by the main contractor. This plan will outline the proposals and methodology to achieve compliance with the current waste management and associated EPA legislation.
- 5.3.2 The appointed contractor shall be vigilant in ensuring that no activities will give rise to pollution of surface water pathways onsite with suspended solids or other polluting substances.
- 5.3.82 During the construction phase, waste will be produced from surplus materials such as broken concrete blocks or off-cuts of timber, plasterboard, concrete, tiles, bricks and waste form packaging (cardboard, plastic, timber) and oversupply of materials. Waste materials will be segregated at source and placed in dedicated skips such as general waste, wood, mixed ferrous and concrete rubble on site to maximise the opportunity for re-use / recycling of materials.



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